

**COMPREHENSIVE ZONING ORDINANCE  
REWRITE PROJECT  
PHASE II**

*Commercial, Industrial, and Mixed-Use Zones*



**MCPB Agenda Item #1  
February 20, 2003**



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

February 14, 2003

**MEMORANDUM**

To: Montgomery County Planning Board

VIA: Charles R. Loehr, Director  
Department of Park and Planning

FROM: Joseph R. Davis, Chief *JRD*  
Development Review Division

SUBJECT: Presentation of Consultant's Reports Concerning Phase 2 of the  
Comprehensive Zoning Ordinance Rewrite Project and Discussion of  
Concepts and Recommended Priorities for Zoning Ordinance and Other  
Procedural Changes

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In the summer of 2001, the Commission engaged the services of Clarion Associates, a nationally recognized planning consultant firm based in Denver Colorado, to help us evaluate current ordinances and regulations applicable to commercial, industrial and mixed-use zones in Montgomery County. In addition, we requested Clarion to analyze key development issues and trends affecting the 21<sup>st</sup> Century workplace and to advise us concerning the application of Maryland "smart growth" principles to new commercial, industrial and mixed-use development. The consultant prepared two reports to address key issues and trends in these areas.

Clarion also conducted case studies of two jurisdictions that have recently enacted new mixed-use business district ordinances utilizing smart growth principles. These studies provide useful insights into how planning issues similar to our own have been addressed by others. Planning Department staff initiated a study of mixed-use zones in Arlington, Virginia that guide new development at their transit stations. Staff has not completed that study, at this time. The final piece of work performed by Clarion involved conducting a diagnosis of our current development regulations applicable to commercial, industrial and mixed-use development in the County and preparing a final report which includes a summary of overall findings from their work and recommendations for key revisions to our ordinances.

The Clarion studies are attached to this report, for the Board's information, and key findings and recommendations will be presented to the Board at the February 20<sup>th</sup> meeting. Mr. Christopher Duerksen, the Managing Director of Clarion Associates, will

attend the meeting to present his findings and recommendations, and answer questions that the Board members may have about his reports. Staff has reviewed the studies prepared by Clarion and conclude that they contain valuable insights and have helped us to identify key issues that should be addressed in order to improve our ordinances and development process to help us achieve our master plan goals and objectives for transit serviceable, multi-use centers that will provide for a variety of community needs. Based on staff's review of the many factors affecting the development of such centers and discussions with our consultants, we are prepared to identify several key areas where changes in current processes and procedures could facilitate better implementation of our planning objectives. Discussion of staff recommendations and priorities for achieving desired improvements will be the focus of the second hour of our meeting with the Board.

Staff believes that it is important to recognize that we are not able to conduct a comprehensive redo of our commercial, industrial and mixed-use zones, as originally anticipated as part of the FY 03 Budget. The length of time to complete Phase 1 of the project; staff vacancies in Development Review during the year that reached a level of 25 percent during the fall; the high number of text amendments processed through the summer and fall; and the large application caseload have affected our ability to devote adequate staff resources to this project. This has been previously reported to the Board and to the County Council as part of the Department's last Biannual Report and as part of the FY 04 Budget preparation. We believe, however, that it remains an important public objective to improve our ordinances and procedures to maintain growth in the county's employment base, to enhance shopping opportunities and to provide for a variety of housing opportunities in close proximity to transit, employment, shopping and other community activities. Staff therefore recommends that a series of individual text amendments be pursued so that the most critical issues affecting our business and mixed-use zones can be addressed in a timely fashion.

Staff has identified the following major topics as being important for further work that would result in legislation to be enacted by the County Council. As part of the discussion with the Board, we will recommend which topics have the highest priority and should be addressed first. Please remember that this is a starting point for this effort and much work will have to be done to properly scope out and address each issue. We will need to advise the County Council of the priorities, as determined by the Planning Board, and seek input from the development community, other agencies and the general public on possible changes in ordinances, regulations and procedures.

The topics are identified as follows:

- 1) Make significant changes to the mixed-use CBD and RMX zones to facilitate better implementation of master or sector plan recommendations. Strong consideration should be given to deleting the project plan requirements of Division 59-D-2 of the Zoning Ordinance to help streamline the development approval process in our most important business district zones. There should be only one method of development in the CBD and RMX zones and the development standards should be closely aligned with the current optional

method of development. Residential development should be required in all CBD and RMX zoned projects, unless the Planning Board finds at subdivision/site plan approval that a fee-in-lieu of housing would be more appropriate and not conflict with a master/sector plan recommendation. Identify specific incentives to facilitate mixed-use development. Modify the non-conforming structure provisions of the CBD zones to allow renovations to older pre-CBD zone buildings provided that sector plan streetscape improvements are provided.

- 2) Require site plan review in all industrial, commercial and mixed-use zones to provide a level playing field for all projects and to encourage more compatible development.
- 3) Require a housing component in all commercially zoned projects that exceed 50,000 square feet of commercial development or if recommended on a master plan. Require a housing component in larger scale industrial and employment developments or as recommended in a master/sector plan. Identify specific incentives to facilitate mixed-use.
- 4) Allow "big box" retail only at planned regional centers when planned as part of an overall mixed-use development project.
- 5) Delete the TSM and TSR floating zones and rezone current sites to appropriate CBD and RMX zones. This will provide for a more streamlined development approval process for these important transit station areas.
- 6) Amend the MXPDP Zone to delete the requirement for a Division 59-D-1 development plan and replace with an overall concept plan as currently specified for large-scale, multi-phased projects.
- 7) Require residential component as part of the first phase of any CBD, RMX and MXPDP zoned projects.
- 8) Modify the current I-1, I-3, I-4, O-M, C-P and RMX zones to more fully accommodate biotechnology and bio-related uses.
- 9) Modify the Parking provisions contained in the Zoning Ordinance to more accurately reflect the parking requirements for technology related industrial uses and to codify the 1996 interim parking requirements, if appropriate.
- 10) Provide for TDR receiving areas as part of future commercial, employment and mixed-use developments.
- 11) Consider codifying current environmental guidelines; establish minimum landscaping and lighting regulations/guidelines; establish streetscape regulations/guidelines for specific types of streets; establish guidelines for

amenities in order to help reduce the items subject to continuous negotiation project to project.

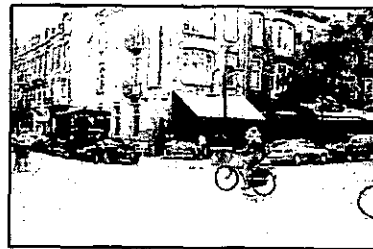
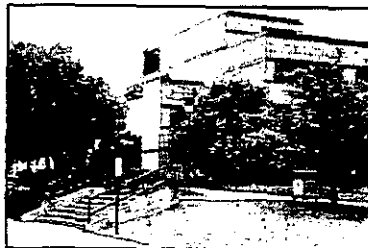
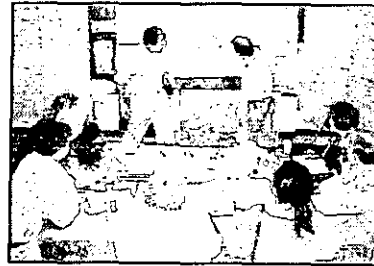
Initiating work on the above list would represent an ambitious undertaking by staff, the Planning Board and the County Council. A schedule and work program will have to be developed to help guide the effort. Staff will initiate the work program upon Planning Board approval of priorities. Some of the Housing recommendations identified in our topic list will be discussed as part of the workforce housing assessment that will be presented to the Planning Board on March 6th.

Staff looks forward to meeting with the Planning Board to present our consultants reports and findings and to discuss the legislative agenda identified in this memorandum.

CRL:JRD

Attachments

**RECOMMENDATIONS FOR REVISIONS TO  
COMMERCIAL, INDUSTRIAL, AND  
MIXED-USE ZONING CODE PROVISIONS  
FOR MONTGOMERY COUNTY,  
MARYLAND**



**PREPARED FOR:  
THE MARYLAND-NATIONAL CAPITAL PARK AND  
PLANNING COMMISSION**

**SUBMITTED BY  
CLARION ASSOCIATES OF COLORADO, LLC**  
1700 BROADWAY, SUITE 400  
DENVER, COLORADO 80290  
303/830-2890  
303/860-1809 FAX  
CLARION@CLARIONASSOCIATES.COM

**FEBRUARY 2003**

**RECOMMENDATIONS FOR REVISIONS TO COMMERCIAL, INDUSTRIAL, AND  
MIXED-USE ZONING CODE PROVISIONS**

**MONTGOMERY COUNTY, MARYLAND**

**February 2003**

**Clarion Associates**

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## INTRODUCTION/BACKGROUND

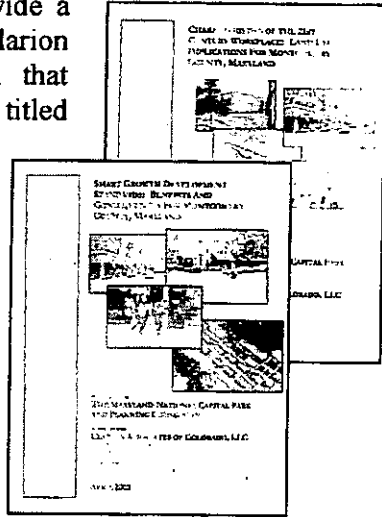
In late 2001, the Maryland-National Capital Park and Planning Commission (M-NCPPC) undertook a project to revise the commercial, industrial, and mixed-use zone district (CIMU) regulations of the Montgomery County Zoning Ordinance. The purpose of this project was several-fold:

- Ensure that the zoning ordinance supports the type of development patterns most desired by the county, specifically mixed-use and transit-oriented development. The county is facing increasing congestion on its highways and streets, attributable in part to land development patterns that encourage use of the automobile. Additionally, the county faces a very competitive environment in retaining existing businesses and attracting new firms and investment. Modern, progressive land development standards and procedures can help address these challenges.
- Promote coordination with the State of Maryland's adopted Smart Growth policies. The State of Maryland has adopted ambitious Smart Growth legislation that aims to direct state resources in such a way as to promote revitalization of older developed areas, discourage sprawl, and enhance preservation of open space. Zoning code provisions can help ensure consistency with these policies.



An article in the Washington Business Journal (April 17, 2000) captured some of the building frustration with current development patterns in the county and the workings of the zoning ordinance that create hurdles to mixed-use projects. The article focused on how existing county zoning regulations make it difficult to create lively, mixed-use business parks that offer a range of services to employees like restaurants or dry cleaners. Lack of such services leads to more auto trips as workers are forced to drive for lunch or to run errands during the day and after work. It also pointed out problems regarding parking requirements that were not tailored to modern biotech business uses, forcing them to provide parking spaces for employees that do not exist—resulting in more pavement, less open space, and more spread-out development patterns.

Recognizing these and other shortcomings with existing CIMU zone district regulations and procedures, the M-NCPPC retained Clarion Associates, a zoning and growth-management consulting firm with offices in Denver, Chicago, Cincinnati, and Raleigh, to make recommendations for revisions. The project consisted of four tasks:

1. Ordinance Review. Task 1 focused on understanding the current CIMU district regulations and how they are working in practice. Clarion conducted a series of roundtable discussions and interviews with members of the development community and county staff who use the regulations on a frequent basis. Additionally, Clarion conducted an independent review of applicable district regulations and procedures based on its experience drafting development codes across the United States, including for fast-growing urban counties like Montgomery County.
2. Analysis of Key Issues and Current Trends. To provide a context for any proposed revisions to the zoning code, Clarion prepared two reports at the M-NCPPC's direction that focused on key issues and current trends. The first, titled "Smart Growth Development Standards: Benefits and Consequences for Montgomery County, Maryland," summarized the principles behind "smart growth" and surveyed existing studies regarding the potential costs and benefits. The second focused on the changing characteristics of the 21<sup>st</sup> Century workplace and business locational decision criteria. It discussed the land use implications for the county of trends in these areas.
 
3. Best Practices Survey. Clarion and M-NCPPC staff conducted case studies of three jurisdictions comparable to Montgomery County (San Diego, California; Fort Collins, Colorado; and Arlington, Virginia) that have recently adopted new business district regulations and smart growth policies. These case studies provided valuable insights that can smooth any implementation steps the county takes.
4. Code Diagnosis/Recommendations: This code diagnosis represents the final step in the process. It includes a summary of findings from the first three tasks and makes specific recommendations for revisions to CIMU districts and the overall zoning ordinance.

The recommendations that follow build on the solid foundation established by the M-NCPPC through a series of prior efforts including a business site inventory, design charrettes for transit stops, a best practices survey relating to transit-oriented development, area plans, and several economic development studies.

## SUMMARY OF FINDINGS AND RECOMMENDATIONS

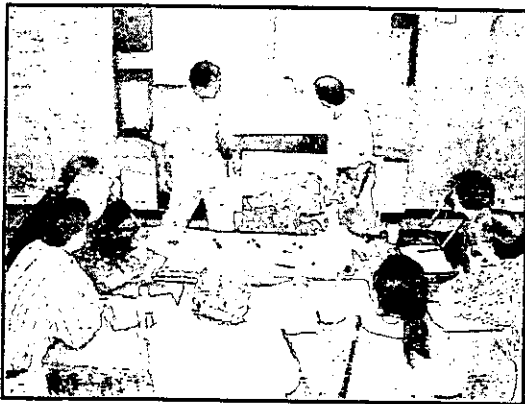
This section provides a brief overview of findings and recommendations that are discussed in greater detail in the body of this report. Based on the interviews, code review, and background reports, we identified three broad categories of problems and issues that need to be addressed in revising the CIMU districts of the zoning ordinance:

1. **Need for more specific standards and processes in the zoning ordinance to make development review more efficient and predictable.**
2. **Lack of a hierarchy of Euclidean mixed-use zone districts available and tailored to encourage mixed-use development with a major non-residential component.**
3. **Uneven development quality and a playing field that is tilted towards standard single-use development versus mixed use.**

While this project was conceived to produce recommendations for targeted revisions to existing CIMU district regulations and procedures, it quickly became clear to the consulting team that the current problems with those districts and development reviews of commercial and industrial projects are more systemic. They will require a broader response. In fact, additional, extensive piecemeal amendments to the zoning ordinance on top of many made in past years may be counterproductive.

### *Short-Term Improvements*

Nevertheless, we believe that there are some amendments and changes that can be made immediately that will help patch things up in the CIMU districts for the short-term while the county considers more comprehensive revisions to the zoning ordinance. Keyed to the three main issues highlighted above, these potential solutions are summarized below:



1. **Need for specific standards and processes in the zoning ordinance to reduce uncertainty.**

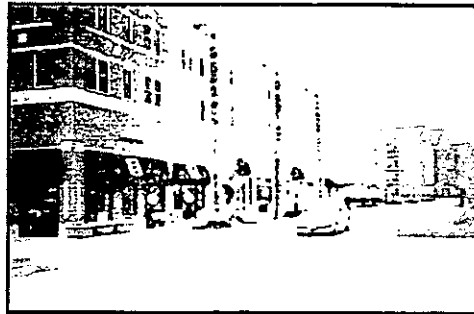
- To create more certainty in the review process and reduce negotiated development, fold

existing substantive guidelines and regulations relating to environmental and resource protection into the zoning ordinance. Finish draft landscaping and lighting guidelines and apply over a 1-2 year test period.

- Create flow charts to summarize decision-making processes and include time "targets" for decision-making at each step. More clarity is needed as to the steps in development review process and role of groups such as the Development Review Committee (which is only referred to in the subdivision ordinance as the "subdivision review committee"). While mandatory limits on decision-making time frames have not worked well in other jurisdictions, non-binding time targets can inject needed discipline into the process so that development reviews take place in a timely fashion.
- Enact an administrative modification provision that allows staff or the Planning Board to approve minor modifications to development standards or site plans in specific instances without a public hearing.

**2. Lack of a hierarchy of Euclidean mixed-use zone districts that is tailored to encourage mixed-use development with a substantial non-residential component.**

- Create a hierarchy of by-right mixed-use zone districts with a substantial non-residential component and begin mapping by the county of preferred mixed-use development locations (e.g., the I-270 Corridor). The new districts should provide greater incentives for mixed-use development with a significant non-residential element (e.g., a wider range of permitted uses) while ensuring that a minimum mix of uses and minimum densities are achieved in designated locations.
- Eliminate obsolete CIMU districts that are not used, do not implement the Master Plan, or are inappropriate for modern development. (However, maintain obsolete district classification only for already developed properties to avoid creating non-conforming uses.) Consider combining other districts that have only minor differences in terms of uses or standards (such as the I-3 and I-4 zone districts). Update district use lists to include modern uses and eliminate outdated, undesirable uses.



**3. Uneven development quality and uneven playing field for mixed-use developments.**

- Implement site planning requirements for ALL commercial and industrial projects to create a process by which substantive development standards can be applied, a practice that is routine in most other jurisdictions comparable to Montgomery County. Currently projects in some districts (e.g., C-1 and CBD) are not subject to site planning requirements, and as a result development quality has, in staff's opinion, suffered in some instances.

- Codify development guidelines (e.g., environmental) as noted above. Apply to all developments, not just mixed-use projects, to level the playing field and remove incentives to build standard single-use projects. Remove procedural disincentives for mixed-use projects such as requirement for a rezoning versus by-right Euclidean mixed-use zones.
- Consider eliminating standard method of development that allows developments to proceed without site plan and subdivision plan review in some instances, a situation that can undermine achieving Master Plan objectives. This is particularly important in the CBD districts where careful site plan and design review is critical to ensure high development quality and compatibility.
- Evaluate the need for the time-consuming project plan process in light of strengthened subdivision process and detailed site plan review procedure.

### ***Longer-Term Revisions***

While these changes will be an important first step, as noted above, our reconnaissance and discussions with staff and development community representatives reveal more serious, deeply rooted problems that need to be addressed more thoroughly and methodically in the long term. Potential long-term solutions, geared to the three main issues, include:

#### **1. Need for specific standards and guidelines.**

- Comprehensively reorganize and reformat the zoning ordinance. Overall, the zoning ordinance is one of the most difficult to use and understand that the consultants have reviewed. Apparently, as is the case in many jurisdictions, the ordinance has been updated and revised piecemeal over time. New provisions have been added to address new problems or opportunities. The result is a document that is poorly organized and hard to navigate. Related provisions are scattered throughout the code and there are conflicts in substantive provisions and definitions and contradictory procedures.
- Codify unwritten procedures and review processes that are routinely employed by staff that are not reflected in the ordinance. For example, the Development Review Committee, which plays a critical role in the review process, is not recognized in the zoning ordinance (it is mentioned only in the Subdivision Ordinance as the "subdivision review committee").

**2. Lack of a hierarchy of Euclidean mixed-use zone districts available and tailored to encourage mixed-use development with a major non-residential component.**

- Continue identifying and mapping preferred locations for mixed-use developments throughout the county (e.g., I-270 Corridor).
- Scrutinize existing home occupation regulations to remove unnecessary impediments to live-work arrangements, especially in new mixed-use developments. (According to staff, a text amendment is under consideration regarding live-work arrangements.)

**3. Uneven development quality and uneven playing field for mixed-use developments.**

- Enact generally applicable, modern development standards in areas that are currently not addressed in the zoning ordinance such as wildlife habitat protection, pedestrian connectivity, location and configuration of open space, landscaping, streetscaping, and lighting.



- Codify substantive guidelines and standards from Master Plans if they are to be used in the regulatory/development review process.
- Explore design standards for transitional areas around new mixed-use developments to ensure compatibility with existing conventional neighborhoods.

These fundamental problems suggest strongly that the zoning ordinance is in need of a comprehensive revision that goes beyond the CIMU district regulations and procedures.

## CODE REVIEW FINDINGS

This section of the diagnosis provides greater detail regarding the main findings of the project based on the interviews and the consultant's independent code analysis. Additionally, the findings and recommendations of the Task 2 Smart Growth and 21<sup>st</sup> Century Workplace reports are summarized, as well as those of the three major case studies.

### *Interviews*

The Clarion team conducted a series of roundtable discussions with staff and representatives of the development community who are frequent code users. Additionally, Clarion circulated a survey to county staff involved in the development review process that solicited their views on the strengths and weaknesses of the existing code. The major observations from these groups are distilled below, broken into substantive and procedural comments. (Detailed interview summaries were submitted to the county.) Interestingly, there was a fair degree of consensus between the staff and those from the private sector regarding key problems with the existing code.

#### *Staff – Substantive Issues*

- Development standards in key areas (landscaping, lighting, streetscaping, and parking) are either not codified, out-of-date, or do not exist. This leads to significant uncertainty in the development review process and sometimes lengthy negotiation, especially if the site planning process is applicable, or to a less desirable quality of development if the project is exempt from site planning approval.
- The staff has little flexibility to modify or adjust development standards (e.g., setbacks, buffer requirements) where there is a conflict between standards. This can lead to delays in processing and actually lower development quality.
- Zoning regulations are not always in accord with Master Plans. The Planning Board can disapprove development in some instances (e.g., in the MXPDP zone district) if inconsistent with a Master Plan even if development complies with the code. This creates some fundamental conflicts between the two documents and leads to uncertainty in the development review process according to developers.
- There are too many zone districts, which makes the code difficult to administer. Some are obsolete while others overlap and are candidates for consolidation. Some districts such as the C-1 allow almost anything with few conditions or quality standards.

- Zone districts sometimes work at cross-purposes with and do not implement the Master Plan. Sectional Map Amendments and overlay districts can be used to address this issue. Mixed-use developments with residential, for example, are very difficult to do in industrial districts. Transit-oriented districts fail to provide sufficient incentives for or require higher density residential development.
- The RMX (Residential Mixed-Use) Districts are reportedly working well and may serve as a model for a mixed-use zone district that allows a wider range of non-residential uses such as offices and light industrial. Historically, the CBD zone districts have worked well to encourage new development, but as these areas have matured, there is a need for revisions to encourage use of the optional method to ensure consistent development quality.
- Many contemporary uses (e.g., biotechnology uses with modern parking requirements) are not included in the use charts. Other allowed uses are outdated or incompatible with newer, desired uses.

#### *Staff – Procedural Issues*

- The code on the web is searchable, but there are no links to definitions, key words, or other documents. Additionally, according to staff the on-line version contains errors. The paper version of the zoning code is very difficult to use.
- Development standards and definitions are either scattered throughout the code, in other documents/ordinances, or nonexistent for important topics. They need to be consolidated.
- Due in part to a lack of key substantive standards (e.g., landscaping, lighting), there is too much negotiated development with little guidance. This can be very time-consuming for staff as well as applicants. Additionally, too much detail is required for development proposals too early in the process because of community pressure. While early issue identification is critical, fixing details very early in the process makes it difficult to respond flexibly and creatively to issues later in the process.



#### *Developers*

- Developers and their professional representatives (lawyers, planners, engineers, etc.) voiced many of the same concerns as the staff, especially focusing on the lack of standards in the ordinance and development review procedures that do not follow what is written in the code.

- Many of the commentators from the development community felt that the zoning ordinance lacks responsiveness to market realities. They cited as an example the requirement for ground floor retail and structured parking in some zone districts. This has, in their opinion, resulted in vacant first floor storefronts that are expensive to carry financially and have a deadening influence on street activity. They suggest use of incentives (such as density bonuses, exclusion of ground-floor retail from FAR calculations, quicker processing) to achieve these types of goals, not just regulations.
- Important terms such as “public use” and “public amenities” that are used by staff in the review process (Optional Development Method) to impose development requirements need to be defined in greater detail.
- Master Plan guidelines are not consistently followed so applicants do not know when to rely on them. Some Sector Plans are too detailed and require amendment to conform to proposed development plans.
- Developers are given only 10 minutes to make presentations to the Planning Commission at public hearings while opponents have unlimited time. They must rely on staff to flesh out details, but staff comments are not part of the record on appeal. Developers uniformly felt that more time was needed to make their case and contrasted their experience in other nearby jurisdictions.

#### ***Consultant Code Review***

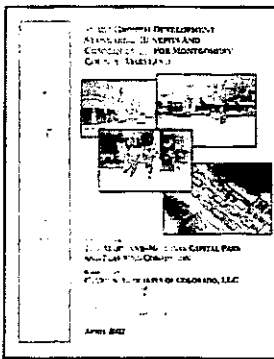
- The development review process as it is practiced is not reflected in the zoning ordinance; bodies such as the Development Review Committee (DRC) that play a major role are not mentioned in the zoning code (a “subdivision review committee” is noted in the subdivision ordinance). There are no flow charts to illustrate the process graphically.
- The code is very difficult to use, even for seasoned veterans. Basic features to make it more user-friendly—subject headers/footers on each page, a comprehensive table of contents, and illustrations/ graphics are either absent or limited at best.
- Major substantive land use regulations are scattered in many sections of the county code (e.g., historic preservation, tree conservation, subdivision) or in guidelines (e.g., environmental/ natural resource).
- A substantial number of modern development standard issues are not addressed in the code (e.g., landscaping, lighting, streetscaping) or are outdated (parking requirements).

## SUMMARY OF 21<sup>ST</sup> CENTURY WORKPLACE AND SMART GROWTH REPORTS

As noted above, the consultants prepared two major background reports at the county's direction to provide a context for any proposed revisions to the zoning code. The first, titled "Smart Growth Development Standards: Benefits and Consequences for Montgomery County, Maryland," summarized the principles behind "smart growth" and surveyed existing studies regarding the potential costs and benefits of smart growth policies and regulations. The second focused on the changing characteristics of the 21<sup>st</sup> Century workplace and business locational decision criteria. It discussed the land use implications for the county of trends in these areas. This section provides a brief overview of these two reports; full text versions are available from the county.

### *Smart Growth Development Standards: Benefits and Consequences for Montgomery County*

"Smart Growth" has become the rallying cry nationally for many communities and state governments as an approach to managing growth in a thoughtful and methodical fashion. The State of Maryland has been a leader in this area, having adopted ambitious Smart Growth legislation in 1992 and 1997. Collectively, these initiatives aim to direct state resources to revitalize older developed areas, preserve some of Maryland's valuable resources and open space lands, and to discourage the continuation of sprawling development into rural areas. Smart Growth has become the new paradigm for land development and growth management in Maryland, and the principles of Smart Growth have been embraced by a diverse number of organizations, citizen groups, and communities interested in finding innovative solutions to the unintended consequences of growth.



But exactly what does Smart Growth mean at the local level? What are some of the key principles behind Smart Growth? How can Smart Growth be implemented at the local level? What are the benefits and potential consequences of applying Smart Growth – based standards in the development review process? Will the market accept Smart Growth regulations?

This report first presents an overview of the guiding principles of Smart Growth, drawn from a variety of sources including the state's Smart Growth legislation and programs. Next it examines the potential benefits of adopting Smart Growth programs at the local level, such as reducing traffic, providing housing choices, and preserving open space. We also looked at potential consequences—for example, rising land costs and regulatory gridlock. In other words, what are the potential strengths and weaknesses of local Smart Growth programs? Finally, the report examines the issues of political and market acceptance of Smart Growth, forces that need to be understood in revising zoning regulations to reflect Smart Growth goals.

Smart Growth has come to mean many things to different people. To take Smart Growth goals into account in revising Montgomery County's development codes, it is important to understand the key principles behind the concept. We have distilled the following Smart Growth principles from a variety of sources including the Maryland Department of Planning and the American Planning Association. They begin to provide a roadmap to the changes that will be needed in the county's zoning code to achieve the objectives of Smart Growth.

*Compact Growth*

Concentrate growth in and adjacent to existing developed areas. Avoid leapfrog development into rural areas.

*Mix of Uses*

Encourage developments with a mix of residential, commercial, institutional and other uses that increase choices for people in living, working, and playing. Avoid large islands of single-use development in business parks and residential subdivisions.

*Cost Efficient Use of Public Services and Infrastructure*

Smart growth means favoring developments in neighborhoods and areas where people and businesses will use existing services/facilities like schools, water and sewer lines, emergency services, and roads. Avoid costly extension of services to greenfield sites.

*Quality Design and Community Character*

Build new developments to fit people, not just the automobile. Create lively, interesting living and work environments. Avoid cookie-cutter developments with features that cater to the auto rather than people.

*Transportation Options*

To reduce over-dependence on the auto, take steps to encourage alternative forms of transportation and land uses that support bicycling, walking, and mass transit. Implement policies to make drivers pay the full cost of using automobiles. Avoid developments that are heavily auto-dependent.

*Housing Choices*

Encourage developments and land use patterns that offer a variety of housing choices to an increasingly diverse population. Avoid islands of residential developments with few housing types (e.g., only single-family detached).

*An Efficient, Predictable Development Process*

Because Smart Growth involves a greater level of involvement in the development process than unfettered growth, particular attention must be

paid to ensuring that development review processes are efficient and predictable, but at the same time flexible to address specific site issues. Avoid vague development standards and lengthy, highly negotiated review processes.

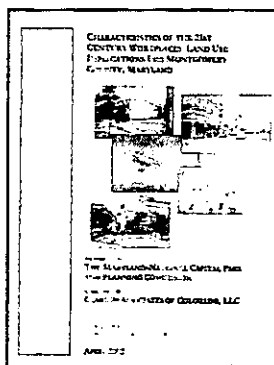
#### Benefits and Consequences of Smart Growth

There continues to be considerable debate over the benefits and consequences of Smart Growth development. Proponents argue forcefully that the total economic, social, and environmental benefits of Smart Growth are real and substantial. They cite studies showing increased transit use, protected natural resources, and consumer preferences for coordinated planning and smart growth amenities such as public spaces, walkable neighborhoods and improved access to transit.

Critics are quick to proffer evidence that Smart Growth has not lived up to the “hype” of decreasing congestion or improving air quality. They maintain that in some cases it has actually increased traffic congestion, raised housing and land costs, and created unmarketable housing products and commercial spaces.

Based on a detailed review of existing studies and our experience with developments around the United States, we conclude there is an increasing body of evidence and studies that demonstrate some of the clear benefits of Smart Growth. The evidence is particularly strong and convincing in the areas of reducing public infrastructure costs and preservation of open space. Studies also show it can have an important role in reducing traffic congestion. However, those benefits are still being debated in the development community and have not been translated into strong developer acceptance at this point.

Fortunately, there are increasing indications that housing consumers, particularly baby boomers, are coming to appreciate the benefits and convenience of living in Smart Growth developments. There is also substantial, project-by-project evidence from across the United States, particularly in urban and suburban jurisdictions, that mixed-use developments can succeed in the market. Perhaps of even more importance, is the evidence that developers and financial institutions are learning the ropes of mixed-use projects and other key elements of Smart Growth development patterns – and that Smart Growth can be a good investment for smart money.



#### ***Characteristics of the 21<sup>st</sup> Century Workplace: Land Use Implications for Montgomery County***

Over the past 20 years, a “New Economy” has emerged, representing an historic shift from manufacturing-based to knowledge-based firms. The New Economy is technology driven and global. It has already begun to restructure metropolitan and urban economies. The firms driving the New Economy have markedly different locational preferences from those that ran the economy two decades ago. The workplace of the 21<sup>st</sup> Century

that is emerging from this shift promises to be markedly different as well. These forces will have a dramatic impact on land use and development preferences and trends throughout the country.

This report focuses on the land use implications of the 21<sup>st</sup> Century workplace for Montgomery County. First, it presents an overview of some of the characteristics of the New Economy such as global commerce, flexible employment systems, and volatile markets. A grasp of these characteristics helps to understand the forces at play that affect development at the local level.

Next, the report discusses the regional locational preferences of growth firms in the technology sector—biotechnology enterprises, software/internet development firms, and high-technology manufacturers. In the past, factors such as cost of labor, tax rates, and similar forces were prime considerations for businesses considering expansion or relocation. Today, issues such as quality of life, availability of technology infrastructure, and expeditious permit reviews are far more important to firms in growth sectors. Local governments must be aware of and respond to these new preferences if they are to be competitive.

Third, the report looks at what these firms and their employees are demanding in terms of site development and workplace configuration. The isolated suburban office park featuring headquarter buildings in a sprawling campus setting – typical of the 1960s and 1970s – is giving way to a different sort of business park and work environment in the 21<sup>st</sup> Century that reflects the needs of the New Economy. Firms and their workers are demanding new amenities, a variety of housing choices, and better transportation access. Again, the land use implications for local governments promise to be significant and suggest some important changes that must be made in local land use and zoning regulations and processes.

The report concludes with a list of potential responses Montgomery County should consider in revamping its land development codes that will help it to better address the changing locational and workplace preferences of firms in the technology sector. In doing so, the report draws on experience in other comparable metropolitan areas such as Seattle, Portland, San Diego, Fort Collins, Colorado, and Cary, North Carolina (Research Triangle area).

#### Conclusions and Recommendations

The locational and site preferences of high-tech companies discussed in the report suggest a number of steps that local governments can take to improve their attractiveness to these firms. This section presents some recommendations for an overarching strategy with respect to revamping and refining development review processes and regulations as well as some specific development code changes that should be considered.

There are several important context points that should be kept in mind while considering code revisions. First, local governments simply are not in a position to influence or respond to some important business locational preferences. For example, one of the

dominant factors for all firms continues to be where the CEO wants to live. That variable is hard to regulate or address. Availability of venture capital is another criterion that is difficult for local governments to control.

Second, high-tech firms vary dramatically in terms of needs, products, employees, and many other factors. Even within one sector, such as biotechnology, locational and siting issues will differ depending on the function of the company, for example, research vs. production. This variety makes it challenging to develop a strategy that will be effective for a wide range of firms.

Finally, while a number of steps to improve land use review procedures and standards are presented in this report, Montgomery County and the Washington, D.C., region are obviously doing something right in terms of attracting and retaining high-tech companies. A recent report for the R.K. Mellon Foundation found that the Washington, D.C., area scored very highly in terms of overall amenities and environmental quality, both factors that tend to correlate with high-technology development. The region already has one of the highest concentrations of high-tech firms in the nation.

#### Specific Land Use Policies

Based on the locational and site preferences of high tech companies identified in this report, Montgomery County should address the following issues in revamping its development codes and processes:

*Encourage or require mixed-use developments.* Some of the county's zone districts (e.g., commercial and industrial) do not allow or severely inhibit the type of lively mixed-use developments favored by many high-tech workers and firms. Many communities such as Austin, Fort Collins, Colorado, and Cary, North Carolina, are not only encouraging but requiring new developments to contain a mix of housing, hotels, educational, and commercial uses. Others provide incentives in the form of density bonuses or "free" residential density on a site in addition to any permitted commercial uses. The county's new RMX (Residential Mixed-Use) districts are reportedly working well to encourage mixed-use developments with a residential emphasis. They can serve as a template for a more non-residentially oriented mixed-use district that encourages office, light industrial, and institutional uses as well as a variety of residential developments

Another aspect of successful mixed-use developments is typically higher density/intensity than conventional projects. An increasing number of communities are requiring minimum densities and a variety of uses at selected locations such as future transit stops. These requirements help to ensure that new developments support mass transit and provide the critical mass for a lively mixed-use development. In contrast, while Montgomery County has been taking steps to encourage residential development around transit stops, there has been little or no high-density residential development at most such sites.

*Encourage or require more amenities in high-tech developments and business parks.* Many high-tech firms and workers are making clear that they prefer to work in

developments that include or have easy access to vital centers with lively amenities and opportunities for interaction. They also value access to open space and recreational opportunities near the work place. Everything from sidewalks and trails to playing fields are assets.

*Promote environmental protection and conservation of natural areas.* High-tech employees value the natural environment both at work and at play. They often oppose sprawl and developments that gobble up open space. Currently, while the county has some regulations on the books to address natural resource protection, including stream buffer and forest conservation standards, it lacks provisions adopted by many other jurisdictions to protect sensitive natural features on a site or open space such as landscaping provisions and wildlife habitat protection standards. Moreover, many developments are not subject to site plan review, which means staff has no authority to review important elements such as connectivity between parcels or landscaping. While staff often attempts to negotiate to accomplish these goals, objective standards would ensure they are achieved while providing more certainty to the development community. The staff is currently working on landscaping provisions, an important initiative that should be completed.

*Focus on specific uses, not buildings.* In regulating development, most jurisdictions focus on the size of a building in regulating items such as parking. There is little flexibility to respond to uses that may have large space needs but relatively few employees (e.g., biotech labs). High-tech firms in the county have complained that they are sometimes required to build expensive parking that never gets used. The county needs to tailor parking and other standards more to specific uses, and then allow flexibility to meet future needs (e.g., set aside land for parking, but don't require paving at the outset).

*Scrutinize home occupation regulations.* Because an increasing number of New Economy workers will telecommute or start-up new businesses at home, the county should carefully examine its home occupation regulations (that are stringent compared to most other jurisdictions) to ensure they do not unnecessarily stifle this important trend. Of course, surrounding residences need to be protected from potential adverse side effects. Additionally, the county should consider creating flexibility for live-work spaces in commercial and other non-residential districts.

*Improve the development review process.* One of the most important needs of high-tech firms is the ability to respond quickly to new market opportunities and demands. This means that local governments that can provide efficient and responsive development review and construction inspection processes will have a leg up.

Currently, both staff and developers in Montgomery County agree that there is much room for improvement. For example, while the county has a specifically designed zoning district for development around transit stations, it is little used because it is cumbersome and time-consuming. According to developers, there is little resemblance between the review process in practice and what is set forth in the zoning ordinance. They also point

out that because the ordinance has so few standards, there is a great deal of uncertainty in the process over what staff will require—it may vary from case-to-case.

In making changes to development review procedures, the county should not overlook the importance of construction and building code review processes. It will do little good to make the development review process more efficient and predictable, only to have it followed by a slow and tedious process of getting a building built or expanded space built out. Some jurisdictions such as Boulder County, Colorado, are allowing for self-inspection by companies to speed this end of the development process.

By making these substantive and procedural changes in its development codes and processes, Montgomery County can help ensure it will be a desirable community and attractive location for high-tech firms and their workers.

## **SUMMARY OF MIXED-USE DEVELOPMENT REGULATION CASE STUDIES**

Task 3 of the project scope called for the consultants to conduct a best practices survey of similarly situated jurisdictions that have recently enacted new approaches to regulating commercial, industrial, and mixed-use developments within the context of smart growth policies and transit-oriented development.

There is currently a good deal of interest and activity in the area of mixed-use development regulations at the local government level across the United States. However, much of this activity is in the conceptual stage or involves only recently enacted standards and regulations, with little actual experience with development of mixed-use projects. For this reason, among others, the staff and consulting team winnowed down a preliminary list of about a dozen communities and selected Fort Collins, Colorado, San Diego, California, and Arlington, Virginia, for scrutiny. Clarion Associates prepared case studies of Fort Collins and San Diego. Fort Collins enacted its mixed-use zoning districts and regulations 5 years ago and now has reviewed a number of projects under them. Several have been constructed. Similarly, in San Diego the city has been encouraging mixed-use development for the past decade and has a project track record also. Arlington County, Virginia, has almost 10 years of experience with transit-related development around its Metro stations. The M-NCPPC staff prepared the Arlington case study.

A key lesson that can be distilled from experience in these cities, as well as others that have been promoting mixed-use developments (such as Portland, Oregon, and Colorado Springs, Colorado), is that a kid-glove approach that relies primarily on incentives and encouragement only will not likely produce the desired results. Because mixed-use developments are a relatively new "animal" in the development community, and because they typically involve extensive negotiations, public hearings, or additional design requirements not applicable to run-of-the mill commercial or residential projects, most developers take the path of lesser resistance. They propose typical single-use developments that avoid these potentially time-consuming complications.

In response, more and more communities are taking an increasingly activist, directed course of action. Some, like Fort Collins and San Diego, are ambitiously planning and mapping areas for mixed-use developments and then requiring new projects in those areas to adhere to standards designed to produce lively, mixed-use projects. The need to deal with traffic congestion is often a driving force to this activist approach. Others, like Colorado Springs, are considering requiring new commercial projects involving discretionary approvals (such as a rezoning) to achieve a mandatory mix of use and meet other standards (e.g., connectivity, community amenities). Colorado Springs is also attempting to "level the playing field" by increasing design requirements for all commercial projects, not just mixed-use developments.

The good news is that more and more mixed-use projects are coming on line in these jurisdictions and elsewhere, and they are establishing a successful track record that promises to breed additional mixed-use projects. Their experience provides some very

useful guidance to Montgomery County in revamping its business district zoning provisions.

This section of the summary presents a brief overview of the two case studies of Fort Collins and San Diego prepared by Clarion Associates. Full versions of the case studies are available from the M-NCPPC staff as well as the Arlington County, Virginia, case study that was prepared by staff.

### ***Fort Collins, Colorado***

Fort Collins is a rapidly growing university community about 75 miles north of Denver nestled against the foothills of the Rocky Mountains and alongside the banks of the Cache La Poudre River. The city encompasses 47 square miles and has a population of 118,600 residents, with an annual growth rate of 2.9 percent for the past decade. It is a regional market center for northern Colorado and southern Wyoming.



□ The previous land use code in Fort Collins (known as the Land Development Guidance System – LDGS) had few objective standards and no mixed-use provisions. Basically, any use could be developed anywhere if performance standards were met. Although some developers favored the flexibility of this previous system, neighborhoods did not like its unpredictability. The quality and substance of each project could vary widely, depending on negotiations with city staff.

In response to this flexible, but unpredictable development system (and also due to rapid development and traffic congestion), Fort Collins started drafting a new code in 1995 and pulled in New Urbanism, Smart Growth, and sustainability ideas. The new plan and code address issues such as compact development form, alternative transportation modes, increased density, neighborhood preservation, affordable housing, wildlife protection, and creating human-scale development. The intent, specifically regarding mixed-use, was to create more cohesive, defined neighborhoods in which many of the residents' needs could be met, such as employment, retail options, schools, and parks.

The new code was adopted in 1997. The primary differences compared to the previous regulations are as follows:

- Zone districts were created and mapped. New mixed-use zoning districts were created to permit a mix of uses, allowing stores and workplaces to be within walking distance of residences. These mixed-use districts were mapped in strategic locations and are mandatory. Office uses are permitted, but are not the focal point of these districts. In addition, several objective

standards were adopted specifically for the mixed-use districts, such as connectivity and block size (e.g., a maximum of 7-10 acres in the Neighborhood Commercial Center District). Importantly, the mixed-use districts have minimum residential densities required to support transit options and promote compact development.

- Flexible performance standards were replaced by more specific, clear development standards. New standards were added to address wildlife habitat protection, pedestrian and auto connectivity, and landscaping. Minimum parking requirements were eliminated for non-residential uses; only maximum limits on parking were imposed.
- Density bonuses were enacted to promote affordable housing in the mixed-use districts. These developments were also exempted from review fees and receive priority processing.
- New administrative modification provisions were added to allow staff to make minor adjustments in development standards to facilitate better design (for example, up to 25% in setback requirements) without having to hold a public hearing.

In general, because the code revisions are relatively new, there has been more use of the new districts on paper than on the ground. While there were only a few projects in the building phase at the time of this report, many more projects are in the approval phase. Two neighborhood centers in Low Density MU Neighborhood Districts have been approved and applications have been filed to approve four Neighborhood Commercial Centers in the past two months, which signals significant interest in building these grocery/retail neighborhood centers. In addition, building permit numbers in general have been rising rapidly in the city.

Primarily, housing developments have been approved thus far under the new code. Projects have met the code's minimum design requirements, and while most observers agree the overall quality of the development has improved, results have been mixed according to staff. Some projects have gone beyond the minimum requirements of the code in terms of quality and site design, and are considered attractive. Regardless of the quality, it is clear that Fort Collins is getting infill and redevelopment that is different than what the city has seen before in terms of higher density and better overall design. What is not clear is how to guarantee quality development every time, even though the new code has contributed to this goal.

There is general agreement among city staff that the connectivity portion of the new standards is working well, and the standard requiring proximity to neighborhood centers/parks has been easy to enforce. However, there is not as much agreement about other portions of the code. For example, some staff members feel that there should be more flexibility to go below the minimum density requirements in the mixed-use districts, although only one developer has requested a lower density. Moreover, despite a

requirement that each development have a variety of housing types, there is still significant segregation of those housing types (e.g., single family pods separate from multi-family units), which was not the city's intent. However, the staff is not sure if this can be remedied through more regulation, or if the staff should continue to rely on persuading developers to physically mix housing types within a project.

Another concern, as mentioned above, is that the quality of development has varied even when minimum standards have been met. There have been wide ranges, even in the same development, in site, architectural, and landscape design. For example, in one location, standards requiring discrete placement of garages were met, yet the resulting streetscapes were very unattractive. Staff members expressed regrets that several standards that existed in the initial draft of the new code were left out of the final version. One of these required a mix of block types (e.g., a mix of commercial, residential, and institutional uses within a specific district or development). No substantive revisions to the code have formally been proposed yet.

Most developers appreciate the clear standards in the new code. When project details are reviewed, either their project meets the requirements or it does not – there is less negotiation. Developers who were accustomed to the former, more flexible system are still reluctantly adapting to the new system, but other developers new to the area or those who are used to similar regulations in other jurisdictions, appreciate the new code. Relating the new code to good design is a challenge according to a developer of a project that met the minimum standards but had obvious problems with design.

The staff and developers in Fort Collins had some useful insights for other jurisdictions incorporating mixed-use provisions into their own codes:

- Develop a strong policy basis for mixed-use through a comprehensive plan.
- Base the location of activity centers and supporting neighborhoods on optimizing transportation system investment.
- Learn from others' mistakes--many jurisdictions have enacted mixed-use zoning districts; get their advice!
- Uses in the right place are half the battle; the other half is tending to the details of design, access, etc.
- Use sound urban design principles to transition mixed-use neighborhoods and adjacent "conventional" neighborhoods.
- Resolve potential conflicts with other local government departments/agencies over issues such as street cross-section, storm drainage, utility placement, and fire protection requirements that can thwart mixed-use, compact development.

## ***San Diego, California***

San Diego has a significant planning and implementation effort underway to promote mixed-use, transit-oriented development in conjunction with the efforts of the area transit agency. The primary elements of this effort are (1) the "City of Villages" strategic element of the city's General Plan and (2) the "Transit First" strategy of the transit agency serving the San Diego area.

San Diego is a city of 1.25 million people encompassing 330 square miles and diverse neighborhoods. The oldest town in California, it was founded in 1850, and its first comprehensive plan was laid out in 1926, with a zoning ordinance approved in 1931. The city's landscape setting is unique, having been built in and around a large canyon system. In the 1950s, the formerly isolated mesa tops around the canyon began to be filled with tract homes, factories, and highways. Downtown continued to be developed with civic amenities such as a bayfront park, stadiums, a Sea World aquarium, and theater; however, the sensitive growth issues were on the city's perimeter, where large numbers of single-family homes and strip malls were being built.

Due to the city's location bordering desert, hills, and the Pacific Ocean, it is dotted with numerous sensitive ecosystems. By the 1970s, citizens of San Diego, perceiving the value of the open space remaining in and around the city, passed bond issues for acquisition; they also began to insist that planning occur to ensure that public services and infrastructure would keep pace with growth. As a result, the city adopted a growth management plan to synchronize services and infrastructure provision with the timing and location of development.

Planning in the city is similar to that in Montgomery County. It is based on a general plan that sets out the goals, objectives, and policies of the city as a whole. Within this overarching framework, over 40 sub-areas have individual community plans. These community plans together constitute the Land Use Element of the General Plan, and each must be consistent with the other community plans and with all parts of the General Plan.



Transit in the metropolitan San Diego area is planned, constructed, and administered by the Metropolitan Transit Development Board (MTDB). Its board of directors is appointed by the local government agencies in the service area. It is not an agency of the city government of San Diego or the other area local governments; however, to coordinate its

goals with the actions of the local governments it provides input on the impact of local government land use decisions on transit service.

Efforts to promote mixed-use development have been under way in San Diego since at least the 1970s, including a transit-oriented design (TOD) guidelines adopted in 1992. However, these initiatives were mostly voluntary in nature, and the results on the ground

were disappointing. Moreover, as street and highway congestion worsened, it became increasingly apparent that it would be financially impossible for the city to build its way out of vehicular congestion. Additionally, there were increasing concerns about public health, including air quality and the effect of auto dependency on obesity and physical fitness. In response to these issues, the city undertook a major change in direction in 1998 to reshape development patterns and promote mixed-use development.

Designed to be a long-term strategy for accommodating predicted growth and development, the new element is built around a "City of Villages" theme. It calls for development to occur in the form of "villages" characterized by high-quality infill and compact new development. Each village is intended to be a pedestrian-friendly "community-oriented center where commercial, employment, and civic/educational uses are integrated with a variety of housing types and densities" along with significant, meaningful public spaces. It will link closely with the Metropolitan Transit Development Board efforts for expansion of transit service as a means of improving quality of life.

While implementation is still a work in progress, the City of San Diego has taken a number of concrete steps to make the new plan a reality, including:

- Mapping village centers and creating master plans for three village centers. The city has also amended community plans to designate village center sites.
- Revising street standards to be more pedestrian-friendly and to accommodate mixed-use development.
- Drafting two overlay zones for implementation of mixed-use and transit-oriented development. The Urban Village Overlay will allow a greater intensity and variety of uses in a compact pattern. The Transit Overlay will implement revised transit-oriented development standards that will be more mandatory instead of guidelines.
- Revisions to existing commercial base zone districts to allow and promote mixed-use development and infill. They include pedestrian connectivity requirements and parking reductions. The base zone districts are subject only to administrative review.

While the San Diego mixed-use and transit-oriented development initiatives are still works in progress, the city's experience offers some practical tips that should be useful in Montgomery County's efforts:

*Eliminate procedural barriers to mixed-use development.*

The procedures that developers must undergo to achieve mixed-use development should, at a minimum, take no more time and effort than those that may be used for less desirable development; all the better if a fast-tracking option exists.

*Address developers' concerns about risk and financing issues.*

Partnerships with and education of the development financing community can address financing problems that may exist for innovative development types, including mixed-use projects. Public-private partnerships show that the local government is serious about supporting mixed-use development and helping it succeed.

*Limit the amount of competing development that can be built in a conventional pattern.*

The experience with the transit-oriented design guidelines cautions that innovative, mixed-use and transit-oriented projects are unlikely to succeed if nearby single-use, auto-dependent developments are in competition to attract tenants and customers. Higher ranges of density and intensity, as well as bonuses, should be reserved for the most desirable development types.

*Improve expectations with superlative demonstration projects.*

Existing, poorly designed multi-family development may have left citizens with a bad impression of higher housing densities. Likewise, experience with aging suburban strip commercial zones can lead to resistance to commercial infill. One well-designed project can serve as a "shining example" that leaders and residents can point to as a model for further development.

*Work to eliminate interdepartmental conflicts.*

Traffic engineering principles that favor movement of cars still tend to conflict with the new planning principles of the City of Villages vision. Differences between departments should be addressed and resolved; otherwise they can lead to processing delays and conflicting directives to applicants.

#### ***Arlington County, Virginia***

The Arlington County, Virginia, case study is available from the M-NCPPC staff.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the interviews, code review, and background reports, we identified three broad categories of problems and issues that need to be addressed in revising the CIMU district-related provisions of the zoning ordinance:

1. **Need for more specific standards and processes in the zoning ordinance to make development review more efficient and predictable.**
2. **Lack of a hierarchy of Euclidean mixed-use zone districts available and tailored to encourage mixed-use development with a major non-residential component.**
3. **Uneven development quality and a playing field that is tilted towards standard single-use development versus mixed use.**



While this project was conceived to produce recommendations for targeted revisions to existing CIMU district regulations and procedures, it quickly became clear to the consulting team that the current problems with those districts and development reviews of commercial and industrial projects are more systemic. They will require a broader response. In fact, more piecemeal amendments to the zoning ordinance on top of many made in past years may be counterproductive.

### ***Short-Term Improvements***

Nevertheless, we believe that there are some amendments and changes that can be made immediately that will help patch things up in the CIMU districts for the short-term while the county considers more comprehensive revisions to the zoning ordinance. Keyed to the three main issues highlighted above, these potential solutions include:

**Problem:**     **Need for more specific standards and processes in the zoning ordinance to make development review more efficient and predictable.**

#### **Solutions:**

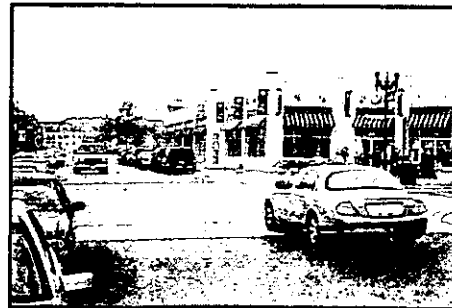
- **Finish proposed landscaping and lighting guidelines.** Revise and codify after 1-2 year testing period. Fold in existing regulations and guidelines relating to environmental and resource protection into the zoning ordinance. This will help create more certainty in the development review process and reduce the need for time-consuming negotiations on a project-by-project basis.

- **Create flow charts** to summarize decision-making processes and include time “targets” for decision-making at each step. More clarity is needed as to the steps in development process and role of groups like the Development Review Committee (which is only referenced as the “subdivision review committee” in the Subdivision Ordinance).
- **Processing Time Targets.** While mandatory limits on decision-making time frames have not worked well in other jurisdictions, general, non-binding targets can instill more discipline in the process so that development reviews take place in a timely fashion. Current Development Review Committee hearing date targets are a starting point for this effort.
- **Enact an administrative modification provision** that allows staff (or the Planning Board) to approve minor modifications (e.g., up to 10%) of standards and site plans. This will be helpful, for example, where there is a conflict between standards and the modification will result in better-designed project with fewer impacts (e.g., forest conservation vs. zoning code open space requirements; setback regulations). No public hearings are required to grant such modifications. Such provisions have been used very successfully in communities like Fort Collins, Colorado.

**Problem:**      **Lack of a hierarchy of Euclidean mixed-use zone districts available and tailored to encourage mixed-use development with a major non-residential component..**

**Solutions:**

- Create a hierarchy of by-right mixed-use zone districts with a substantial non-residential component that are mapped by the county in preferred mixed-use development locations (e.g., the I-270 Corridor). The new district should provide greater incentives for mixed-use development with a significant non-residential element (e.g., a wider range of permitted uses) while ensuring that a minimum mix of uses and minimum densities are achieved in designated locations.
- **Eliminate obsolete CIMU districts** that are not used, do not implement the Master Plan, or are inappropriate for modern development. (However, maintain obsolete district classification only for already developed properties to avoid creating non-conforming uses.) Consider combining other districts that have only minor differences in terms of uses or standards. For example, there is very little difference between the I-3 and I-4 zone districts—they should be combined. New purpose statements are needed in all districts to



help guide staff and applicants in development reviews (especially those that currently have none at all such as the RMX zones). The old PD Zone is a good model in this regard according to staff.

- **Revamp and shrink use lists** in all districts by categorizing uses by major types (e.g., retail) instead of including long lists of specific uses within those types (hardware stores, appliance stores, wearing apparel stores, gift shops, etc. which are all retail uses and are not subject currently to special conditions). Also, update and modernize use lists. Eliminate obsolete uses and include modern uses (such as biotechnology firms with appropriate parking requirements).

**Problem:**     **Uneven development quality and uneven playing field for mixed-use developments.**

**Solutions:**

- **Implement site planning requirements** for ALL major commercial and industrial projects to create a process by which substantive development standards can be applied. Currently projects in some districts (e.g., C-1; CBD standard method) are not subject to site planning requirements, and as a result development quality has suffered in some instances according to staff. Additionally, by not requiring site plans in these areas, developers are encouraged to avoid mixed-use and transit districts that have such requirements. Leveling the playing field is important. Most jurisdictions comparable to Montgomery County with site planning requirements apply them across-the-board to all significant commercial developments.
- **Codify development guidelines (e.g., environmental)** as noted above. Apply to all developments, not just mixed-use and transit-oriented projects, to level the playing field and remove incentives to build standard single-use projects. Remove procedural disincentives for mixed-use projects such as requirement for a rezoning versus by-right Euclidean mixed-use zones that are mapped by county.
- **Consider eliminating standard method of development** that allows developments to proceed without site plan and subdivision plan review in some instances, a situation that can undermine achieving Master Plan objectives. This is particularly important in the CBD districts where careful site plan and design review is critical to ensure high development quality and compatibility.
- **Evaluate the need for the time-consuming project plan process** in light of strengthened subdivision process and detailed site plan review procedure.

### ***Longer-Term Revisions***

However, as noted above, our reconnaissance and discussions with staff and development community representatives reveal more serious, deeply rooted problems that need to be addressed more thoroughly and methodically in the long term:

**Problem:**     **Need for specific guidelines and standards.**

**Solutions:**

- **Comprehensively reformat and reorganize the zoning ordinance:** Overall, the code is one of the most difficult to use and understand that the consultants have reviewed. Apparently, as is the case in many jurisdictions, the code has been updated and revised piecemeal over time. New provisions have been added to address new problems or opportunities. The result is a document that is poorly organized and hard to navigate. Related provisions are scattered throughout the code and there are conflicts in substantive provisions and definitions and contradictory procedures. In sum, the code is in serious need of a comprehensive reformatting and reorganization. (An example of a modern code page format with illustrations and flow charts is set forth in Appendix A.) Once the code is reformatted, the county should consider a more modernized computerized format (such as the Visually Interactive Code used in Henderson, Nevada, which can be viewed at [www.vicgroup.com](http://www.vicgroup.com)) that is fully searchable and includes dynamic illustrations of key concepts and standards.
- **Codify unwritten procedures/processes.** Procedures and review processes that are routinely employed by staff are not reflected in the ordinance. For example, the Development Review Committee, which plays an important role in the review process, is not mentioned in the zoning ordinance (the only reference is to a "subdivision review committee" in the subdivision ordinance). These procedures should be codified and followed or eliminated. Moreover, the county should consider adopting a limited number of standard review processes that are set forth in a single section of the zoning ordinance, rather than the multiplicity of processes (e.g., site plans, project plans, standard method, optional method) now scattered throughout the code.
- **Reduce the amount of process required in the Transit Districts,** which reportedly scares off prospective developers. According to staff, the CBD zones work much better, in part because they do not require a rezoning as do the Transit Districts. Transit Districts should be adopted as by-right Euclidean zones and mapped by the M-NCPPC with specific development standards to implement county planning policies.

**Problem:** Lack of a hierarchy of Euclidean mixed-use zone districts available and tailored to encourage mixed-use development with a major non-residential component.

**Solutions:**

- **Identify and map preferred mixed-use development locations.** The experience in both Fort Collins and San Diego teaches that a purely voluntary regime of mixed-use districts will unlikely to produce significant results very quickly. The county should create new Euclidean mixed-use zone districts, identify those locations at which more intensive mixed-use developments are essential or highly desirable (e.g., transit stops, I-270 corridor, freeway interchanges, major business parks), and then consider mapping them.
- **Scrutinize existing home occupation regulations to remove unnecessary impediments to live-work arrangements.** The county currently has stringent home occupation regulations relative to those in other jurisdictions (e.g., owner must maintain a log of all visits, no non-resident employees, etc.). These regulations should be examined carefully and modified to accommodate home occupation uses, particularly in the context of new mixed-use developments that feature live-work space. (According to staff, a text amendment is under consideration regarding live-work arrangements.)

**Problem:** Uneven development quality and uneven playing field for mixed-use developments

**Solutions:**

- **Enact modern development standards and apply uniformly.** The code contains few modern development review standards relating to issues like landscaping and lighting that help ensure quality development. Some of these exist outside the code (e.g., forest conservation). As a result, most of these issues are negotiated through the site planning process which can be very time-consuming--or developments slide through without having to address these issues adequately. The county needs to take a hard look at standards and guidelines in a variety of areas such as wildlife habitat protection, pedestrian connectivity, streetscaping, and lighting. Some of this work is reportedly already underway with respect to lighting and landscaping. Such standards and guidelines should then generally apply to all development, not just discretionary approvals. Once guidelines are adequately tested for a year or two (e.g., landscaping and lighting) they should be fine-tuned and codified.

Additionally, while the current zoning ordinance devotes some 40+ pages to off-street parking standards, less than a page is devoted to defining and explaining critical issues such as "public facilities and amenities" and "public use space," which are very important aspects of many developments. These

terms, among others, should be defined in quantitative terms where possible and provisions included that address location, design, relationship to other amenities/open space, etc. Illustrations should be included of preferred facilities and open space design.

- **Codify substantive guidelines and standards from master plans.** Many substantive development standards and guidelines are contained in master plans but are not reflected in the zoning ordinance. However, these standards and guidelines become regulatory in nature in some instances because the Planning Commission has the discretion to turn down applications that are not in accord with the relevant plan in several zone districts (e.g., MXPD) and in the subdivision ordinance. This causes a good deal of uncertainty for developers and makes it difficult for staff to administer the process. The county should make a concerted effort to incorporate standards and guidelines that are contained in the plans as regulations in the zoning ordinance. To the extent such standards and guidelines remain in the plans or are contained in future plans, they should be drafted in as specific, quantifiable terms as possible, not vague hortatory language (e.g., if new development is to be "compatible" with existing neighborhoods, the plans should define what is meant by compatibility in that specific context.)
- **Explore design standards for transitional areas around new mixed-use developments** to ensure compatibility with existing conventional neighborhoods. Experience in San Diego and other communities that have promoted mixed-use developments make clear that design standards that address height, bulk, setbacks, architectural features, and similar considerations can be very helpful in winning acceptance of large mixed-use projects by neighboring existing residential areas.

The challenges that the county staff, developers, and citizens-at-large face in using the zoning ordinance are substantial. The solutions recommended here are ambitious and will take a significant commitment in terms of time and resources. In making any such changes, the fact needs to be kept in mind that the county has done many things right in reviewing and encouraging new development. The county has many exemplary developments, and its quality of life is viewed with envy and admiration by local officials from other jurisdictions in the region and nationally. With that in mind, any changes and revisions should be sure to maintain the strengths of the existing development review system.

## **APPENDIX**

**Page formatting example**

**Examples of illustrations and graphics**

**Examples of flow charts**

**Summary use table example**

## Page Formatting

Note especially the header that shows the chapter and section information, and the use of font styles to make transitions between topics stand out.

### 9. Off-Street Parking Area Screening

Off-street parking areas shall be screened in accordance with the standards of Sec. 19.9.2.

#### O. Loading Area Design

Required off-street loading spaces (See Sec. 19.9.1-B and 19.9.1-D) shall not be located within a building, but shall be on the site of the use served or on an adjoining site. On a site adjoining an alley, a required loading space shall be accessible from the alley unless alternative access is approved by the Traffic Engineer. A required loading space shall be accessible without backing a truck across a street property line unless the Traffic Engineer determines that provision of turn-around space is infeasible and approves alternative access. An occupied loading space shall not prevent access to a required off-street parking space. A loading area shall not be located in a required setback. In addition, street side loading docks shall be set back at least 70 feet from the street property line or 110 feet from the street center line, whichever is greater. No loading bay may intrude into any portion of a required aisle or access dimension. Loading areas visible from a street shall be screened on 3 sides by a solid, decorative fence, wall, or hedge at least 6 feet in height.

### Sec. 19.9.2/ Landscaping and Screening

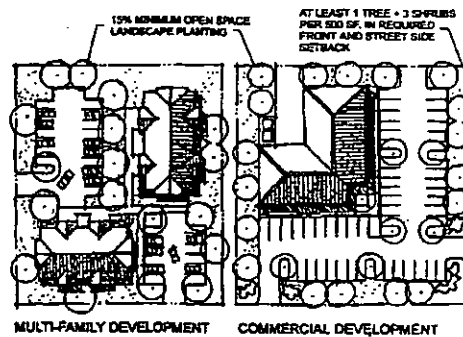
This section sets out the minimum landscaping, buffering and screening requirements for development within the City of Henderson.

#### A. Open Space Landscaping

##### 1. Landscape Planting Area

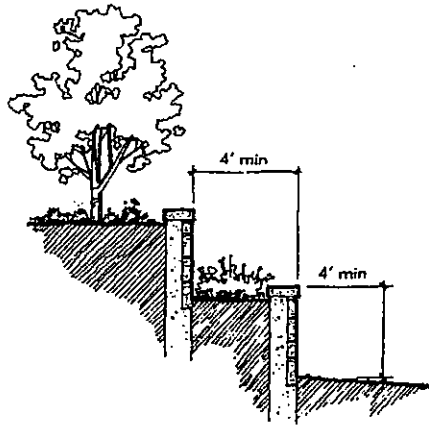
Open Space Landscape planting area shall be provided in accordance with the following schedule of requirements:

Minimum Open Space Landscaping Requirement by Zoning District (Percent of Lot)										
CN	CO	CC	CH	CT	CA	IL	IG	IP	SP	Multi-Family and Nonresidential Uses in R Districts
15	15	15	15	20	15	15	15	15	15	15

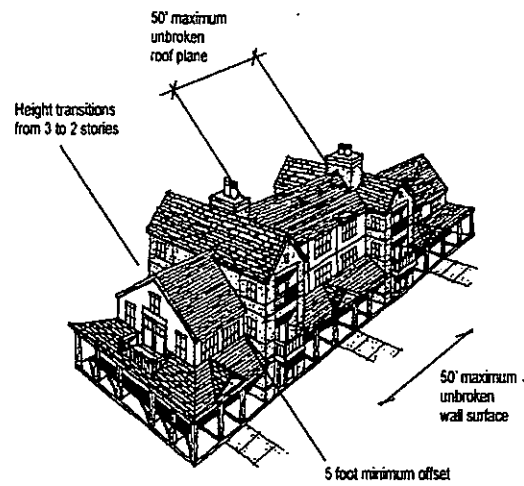


Open Space Landscaping Requirements

## Illustrations and graphics

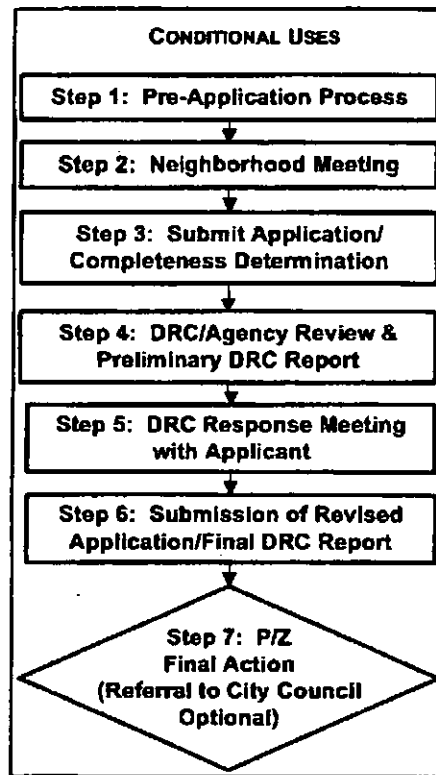
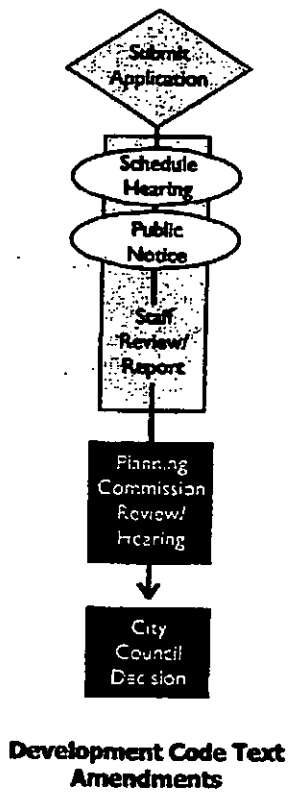


*Figure 2— The width of the terrace between any two 5-foot retaining walls shall be a minimum of 4 feet and maximum slope of 3:1.*



*Figure 18—All buildings shall be designed to provide complex massing configurations with a variety of different*

## Flow Charts



# Summary Use Table

## CHAPTER 15.04: Use Regulations Section 15.04.010: Principal Permitted Uses by Zoning District

J. Table 15.04-A: Table of Permitted Principal Uses by Zoning District

TABLE 15.04-A: TABLE OF PERMITTED PRINCIPAL USES																
P = Permitted By-Right    C = Conditional Use    L = Limited Review    Blank Cell = Prohibited																
USE CLASSIFICATION & SPECIFIC PRINCIPAL USES	ZONING DISTRICT														Additional Regulations (Apply in All Districts Unless Otherwise Stated)	
	U	CU	C	R	R2	RM	RLE	RMD	MD	CD	CU	CBD	BLI	MI		G
<b>A. Residences &amp; Other Living Accommodations</b>																
Includes places where people live - what people would identify as their place of residence. Does not include commercial, transient types of living accommodation such as hotels or motels.																
Affordable housing	P	P	P	P	P	P	P	P	P	L		P	L			3; C & BLI: 2, 29
Boarding, rooming houses				L	P				L	P		P				
Family-care homes	P	P	P	P	P	P	P	P	P			P				13
Group-care homes	C	C	C	P	P		C	C	P	P		P				13; RLE & RMD: 28
Group-care institutions				L	P				L	P		P				13
Halfway houses										C		C				13, 24
Mobile home parks						P										19
Mobile home subdivisions						P										19
Multifamily dwellings (5 or more dwelling units)				P	P		C			C		P				RLE: 28; C: 2, 29
One-family dwelling	P	P	P	L	L		P	P				L				19; R2, R3, CBD: 2, 29
Residential rehabilitation facility									C	C		C				13, 24
Townhome dwelling				P	P		C	C				P				RLE & RMD: 28
Two-, three- and four-family dwellings				P	P		C	C				P				RLE & RMD: 28
Urban dwelling units:																
1. 25 du/acre or less										L		P	L	L		79, 31
2. More than 25/du acre										C		C	C	C		79, 31
<b>B. Consumer Goods and Services</b>																
Businesses that offer items for sale to the general public or services to the general consumer. These are the retail and service outlets used by residents to keep their households operating. Operation of all principal uses shall be conducted primarily inside an enclosed structure unless otherwise specified in this Use Table 15.04-A.																
Automobile service station										L	L	C	C	L	L	16, 24, BLI 2, 30; §15.05.080.N
Bed and breakfast establishments				C	L		C	C		P		P				4, 42 & R3: 2
Car wash										L		C		L	P	16, 24, 30; §15.05.080.N
Commercial Shopping Center											C					7, 8, 24

# **SMART GROWTH DEVELOPMENT STANDARDS: BENEFITS AND CONSEQUENCES FOR MONTGOMERY COUNTY, MARYLAND**



**PREPARED FOR:**

**THE MARYLAND-NATIONAL CAPITAL PARK  
AND PLANNING COMMISSION**

**SUBMITTED BY**

**CLARION ASSOCIATES OF COLORADO, LLC**

1700 BROADWAY, SUITE 400

DENVER, COLORADO 80290

303/830-2890

303/860-1809 FAX

CLARION@CLARIONASSOCIATES.COM

**APRIL 2002**

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NOTE: Selected photos were utilized from the image bank of the Congress for the New Urbanism.

# **SMART GROWTH DEVELOPMENT STANDARDS: BENEFITS AND CONSEQUENCES FORMONTGOMERY COUNTY, MARYLAND**

**Clarion Associates  
April 2002**

## **I. INTRODUCTION**

“Smart Growth” has become the rallying cry nationally for many communities and state governments as an approach to managing growth in a thoughtful and methodical fashion. The State of Maryland has been a leader in this area, having adopted ambitious Smart Growth legislation in 1992 and 1997. Collectively, these initiatives aim to direct state resources to revitalize older developed areas, preserve some of Maryland’s valuable resources and open space lands, and to discourage the continuation of sprawling development into rural areas. Smart growth has become the new paradigm for land development and growth management in Maryland, and the principles of smart growth have been embraced by a diverse number of organizations, citizen groups, and communities interested in finding innovative solutions to the unintended consequences of growth.

But exactly what does Smart Growth mean at the local level? What are some of the key principles behind Smart Growth? How can Smart Growth be implemented at the local level? What are the benefits and potential consequences of applying Smart Growth – based standards in the development review process? Will the market accept Smart Growth regulations?

This report, part of a zoning code rewrite project initiated by the by the Montgomery County Council and the Montgomery

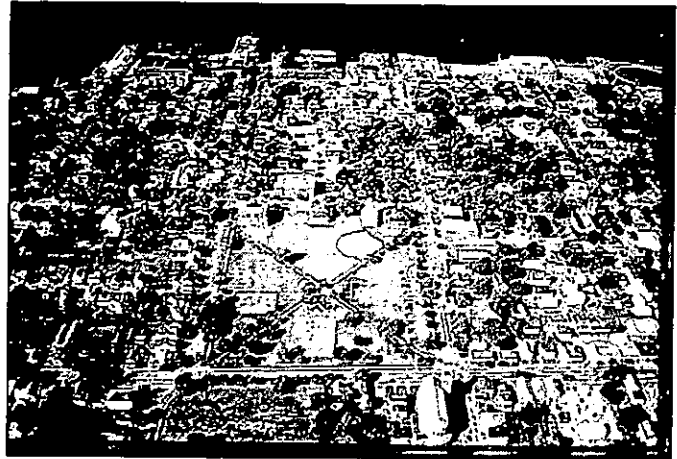
County Department of Park & Planning of the Maryland-National Capital Park & Planning Commission, addresses these issues. It first presents an overview of the guiding principles of Smart Growth, drawn from a variety of sources including the state’s Smart Growth legislation and programs. Next it examines the potential benefits of adopting Smart Growth programs at the local level, such as reducing traffic,



providing housing choices, and preserving open space. We also look at potential consequences—for example, rising land costs and regulatory gridlock. In other words, what are the potential strengths and weaknesses of local smart growth programs? Finally, the report examines the issues of political and market acceptance of Smart Growth, forces that need to be understood in revising zoning regulations to reflect Smart Growth goals.

## II. THE PRINCIPLES OF SMART GROWTH DEVELOPMENT

Smart growth has come to mean many things to different people. To take Smart Growth goals into account in revising Montgomery County's development codes, it is important to understand the key principles behind the concept. We have distilled the following Smart Growth principles from a variety of sources including the Maryland Department of Planning and the American Planning Association.<sup>1</sup> They begin to provide a roadmap to the changes that will be needed in the county's zoning code to achieve the objectives of Smart Growth.



### SMART GROWTH PRINCIPLES

- Compact Growth and Preservation of Open Space/Environmental Resources
- Mix of Uses
- Cost Efficient Provision of Public Services and Infrastructure
- Quality Design, Community Character, and Sense of Place
- Transportation Options
- Housing Choices
- Efficient, Predictable Development Process

<sup>1</sup> Maryland Department of Planning, "What Is Smart Growth," (2002); The Principles of Smart Development, American Planning Association PAS Report No. 479 (1998); "Guides for Sustainable Community Development," The Florida Center For Community Design and Research at the University of South Florida (2002-Online); "Smart Growth: More Efficient Land Use Management," Victoria Transport Policy Institute (2002-Online)

## COMPARING SMART GROWTH AND SPRAWL

Smart Growth	Sprawl
Higher Density, clustered development	Low-density development
Infill (brownfield) development	Urban periphery (Greenfield) development
Mixed land use	Large areas of homogeneous land use
Multi-modal transportation and land use patterns that support walking, cycling and public transit	Automobile-oriented transportation and land use patterns, poorly suited for walking, cycling and transit
Streets designed to accommodate a variety of activities. Traffic calming.	Streets designed to maximize traffic volume and speed.
Planned and coordinated between jurisdictions and stakeholders	Unplanned, with little coordination between stakeholders
Emphasis on the public realm (streetscapes, pedestrian environment, public parks, public facilities).	Emphasis on the private realm (yards, shopping malls, gated communities, private clubs).
Source: "Smart Growth: More Efficient Land Use Management," Victoria Transport Policy Institute (2002—Online)	

### Compact Growth:

Concentrate growth in and adjacent to existing developed areas. Avoid leapfrog development into rural areas.

Perhaps the primary tenet of Smart Growth is to focus development in existing communities and neighborhoods to take advantage of existing infrastructure and avoid sprawling out into rural areas in a fashion that chews up open space, farmland, and environmentally sensitive areas.

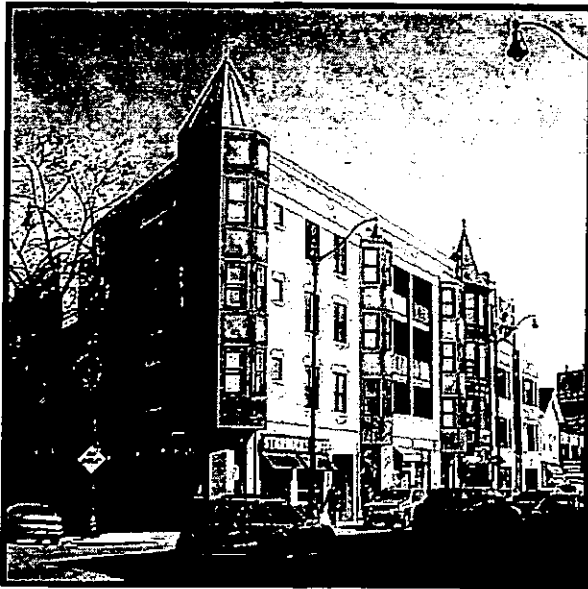
Compact growth also usually assumes higher overall density developments that tend to be more walkable, provide the critical mass needed to support retail and commercial uses, reduce air pollution, and support alternative modes of transportation. An emerging benefit of compact growth is

that it promotes public health in a variety of ways including better air and water quality and opportunities for walking and other physical exercise.

Importantly, Smart Growth does not eliminate urban expansion or suburban development. Rather, it changes the nature of such development to help achieve resource efficiency and community character goals.

### Mix of Uses:

Encourage developments with a mix of residential, commercial, institutional and other uses that increase choices for people in living, working, and playing. Avoid large islands of single-use development in business parks and residential subdivisions.



This principle is based on the premise that locating houses, stores, offices, schools and other uses in close proximity to one another will promote independence of movement, reduction of auto use, housing choices, and lively places.

#### **Cost Efficient Use of Public Services and Infrastructure:**

Smart growth means favoring developments in neighborhoods and areas where people and businesses will use existing services/facilities like schools, water and sewer lines, emergency services, and roads. Avoid costly extension of services to greenfield sites.

This principle calls for directing growth into areas that will make full use of existing urban services that is not only more cost efficient than extending new services outside urban growth areas, but draws on the assets of existing neighborhoods and communities, and supports neighborhood revitalization efforts.

#### **Quality Design and Community Character:**

Build new developments to fit people, not the automobile. Create lively, interesting living and work environments. Avoid

cookie-cutter developments with features that cater to the auto rather than people.

Detailed, human-scaled design is an important principle of smart growth development in that it tends to increase community acceptance of compact, mixed-use development. Attention to a building's massing, scale and orientation, along with effective landscaping and architectural details, contribute to the successful compatibility between diverse uses and building types.

Designing safe, attractive streets that are balanced for pedestrians, cyclists and vehicles, promotes pedestrian movement and also leads to a greater sense of community through informal interactions with neighbors. Community safety is also improved with attractive, pedestrian-friendly street design.



Finally, good design can help create attractive, lively spaces that provide places for people to gather and interact.

#### **Transportation Options:**

To reduce over-dependence on the auto, take steps to encourage alternative forms of transportation and land uses that support bicycling, walking, and mass transit. Implement policies to make drivers pay the full cost of using automobiles. Avoid

developments that are heavily auto-dependent.

This development principle calls for alternative modes of transportation, reducing traffic congestion, and making neighborhoods safer. Compact, mixed use development patterns, connected by a safe, convenient network of streets and sidewalks, encourage:

- Walking, cycling, and transit as viable alternatives to driving;

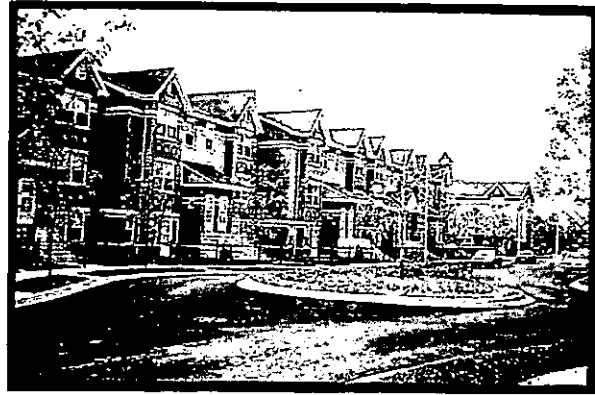


- A variety of alternative travel routes, thereby dispersing traffic and lessening congestion; and
- Lower traffic speeds, making neighborhoods safer.

### **Housing Choices:**

Encourage developments and land use patterns that offer a variety of housing choices to an increasingly diverse population. Avoid islands of residential developments with few housing types (e.g., only single-family detached).

Our society is becoming increasingly diverse in terms of age, ethnicity, income, and lifestyles. Smart Growth developments reflect this diversity by providing a range of housing choices in a variety of locations. Smart growth developments avoid large pods of a single housing type, but rather



offer a variety of single-family and multi-family development forms (e.g., detached, townhomes, zero-lot line homes, apartments, etc.).

### **An Efficient, Predictable Development Process:**

Because Smart Growth involves a greater level of involvement in the development process than unfettered growth, particular attention must be paid to ensuring that development review processes are efficient and predictable, but at the same time flexible to address specific site issues. Avoid vague development standards and lengthy, highly negotiated review processes.

This principle recognizes the important role that local land use regulations will play in facilitating Smart Growth development. Frustrating, costly, and time-consuming delays are often cited by both developers and planners as barriers to more innovative development and design. In a recent roundtable discussion with developers in Montgomery County, participants agreed that one reason that developers shied away from mixed-use projects was that zoning regulations lacked specific standards and guidelines, which made the process too subjective and difficult to get through. A similar discussion with county staff confirmed that the lack of standards and guidelines tended to increase the uncertainty of the review process, and contributed to a

more burdensome workload for staff. Changes in the zoning code can help address some of these regulatory barriers.

### III. THE BENEFITS AND CONSEQUENCES OF SMART GROWTH

There continues to be considerable debate over the benefits and consequences of Smart Growth development. Proponents argue forcefully that the total economic, social, and environmental benefits of Smart Growth are real and substantial. They cite studies showing increased transit use, protected natural resources, and consumer preferences for coordinated planning and smart growth amenities such as public spaces, walkable neighborhoods and improved access to transit.

Critics are quick to proffer evidence that smart growth has not lived up to the “hype” of decreasing congestion or improving air quality. They maintain that in some cases it has actually increased traffic congestion, raised housing and land costs, and created unmarketable housing products and commercial spaces.

This section provides an overview of the supposed benefits of smart growth and some of the potential negatives. It concludes that the weight of evidence and opinion is that Smart Growth offers some modest, but nevertheless important potential benefits to communities in terms of reduced dependence on automobiles, reduced infrastructure costs, and protection of open space, among others.

#### **Decreased Dependency on Automobile Travel/Decreased Congestion:**

One of the most hotly debated issues is whether Smart Growth really reduces dependence on the automobile or reduces

traffic congestion. While there is evidence going both ways, overall it appears that communities can expect a modest decrease in the amount of traffic associated with development in a compact scenario—perhaps in the 3-5% range.

#### Reduction in Vehicle Miles Traveled

Vehicle miles traveled (VMT) are increasing nationwide. Three factors have contributed to this growth—changing demographics, growing automobile dependence, and longer travel distances. Since sprawl development patterns create longer travel distances and



dependence on the auto, Smart Growth advocates assert they add to VMT. This position is supported by numerous studies linking lower vehicle miles traveled to more compact, mixed-use development patterns. A 1990 study in the San Francisco Bay area and a 1994 report on 28 other communities found that a doubling of residential densities produced 16 percent fewer vehicle miles traveled.<sup>2</sup> A 1997 study by the Urban Land Institute confirmed that as densities increase, per capita vehicle miles of travel decline, although other research indicates that the amount of reduction in a region is closely tied to the magnitude of existing development to new.<sup>3</sup> The more an area is

<sup>2</sup> Holtzclaw, J. 1994. *Using Residential Patterns and Transit to Decrease Auto Dependence and Costs*. San Francisco, CA: Natural Resources Defense Council.

<sup>3</sup> Dunphy, R.T.; D.L. Brett; S. Rosenbloom; and A. Bald. 1997. *Moving Beyond Gridlock: Traffic and Development*. Washington, DC: ULI-Urban Land Institute.

already developed, the less new development patterns will add to VMT. Finally, an influential study by Professor Robert Cervero, a leading transportation expert, found that segregation of uses and a leapfrog development pattern were both linked to increased VMT.<sup>4</sup>

#### Increased Share of Trips by Alternative Modes, Fewer by Auto

Smart Growth supporters maintain that compact, mixed-use development patterns will reduce the need for most trips to be made by auto compared to lower density development with spatially segregated land uses. Again, this position finds significant support in the research literature. For example, an extensive study by Parsons Brinckerhoff in 1996 found that residents of denser, more mixed-use neighborhoods were more likely to go by transit or to walk for all types of trips.<sup>5</sup> Another part of this project showed that higher residential densities in rail corridors and higher employment densities increase rail use. These conclusions were supported by a study of the importance of commercial establishments to encouraging walking trips in several Austin neighborhoods. It found the total savings in auto travel by households to be small, but statistically significant and increased with the number and variety of stores.<sup>6</sup>

Another project undertaken for the Federal Highway Administration in Los Angeles concluded that urban design and land use

characteristics that can be controlled by local governments can influence a person's choice of commuting mode. The findings demonstrate that transportation demand management programs and transportation alternatives, combined with opportunities to accomplish mid-day errands without having to drive, reduce the use of single-occupant vehicles for commuting by at least 3 percent. The greatest reduction was realized in areas with an aesthetically pleasing urban character.<sup>7</sup> An ITE study of mixed-use developments in Colorado found that peak hour ITE rates should be reduced by 2.5 percent when applied to mixed use developments.<sup>8</sup> A National Cooperative Highway Research Program report reached similar conclusions. It identified a direct relationship between the proximity of services to offices and the propensity of the workers to walk to their midday destinations. Generally if the walk distance was less than 2,000 feet, a higher number of midday walk trips took place.<sup>9</sup>

Another interesting report prepared for Montgomery County in 1993 by a consulting team led by Sasaki Associates, "Transit and Pedestrian Oriented Neighborhoods Design Study," found that fewer workers in transit and pedestrian oriented neighborhoods in several Maryland communities drove to work alone than in other nearby neighborhoods—by margins of from 9-15%. And numbers taking transit were 1-8% above those in adjacent neighborhoods.

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<sup>4</sup> Cervero, Robert, and Kang-Li Wu. 1996. "Subcentering and Commuting: Evidence from the San Francisco Bay Area, 1980-1990." Paper presented at the 1996 TRED Conference on Transportation and Land Use. Cambridge, MA: Lincoln Institute. October.

<sup>5</sup> Parsons Brinckerhoff Quade and Douglas. 1996c. "Influence of Land Use Mix and Neighborhood Design on Transit Demand." Unpublished report for TCRP H-1 project. Washington DC: Transit Cooperative Research Program, Transportation Research Board. March.

<sup>6</sup> Susan Handy, "Urban Form & Pedestrian Choices: Study of Austin Neighborhoods, Transportation Research Review (1996).

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<sup>7</sup> Cambridge Systematics, Inc., "Effects of Land Use and Demand Management on Traffic Congestion & Transportation Efficiency," Federal Highway Administration (1994).

<sup>8</sup> Institute of Traffic Engineers, "Trip Generation For Mixed-Use Developments," ITE Journal, February 1987.

<sup>9</sup> K.G. Hooper, "Travel Characteristics at Large-Scale Suburban Activity Centers," Report #323, National Cooperative Highway Research Program, Transportation Research Board (1989).

The findings of numerous other studies are well-summarized by Kenworthy and Newman who compared automobile travel growth in central, inner, and outer neighborhoods:

“It is clear that the level of automobile use is not simply a matter of how wealthy people are, but is also heavily dependent on the structure of the city and whether transport options are available other than the automobile. Thus as cities become more dispersed and lower in density towards the edges, the level of compulsory automobile use rises markedly, regardless of income.”<sup>10</sup>

#### Contrary View

While there is a significant amount of empirical evidence that Smart Growth development patterns have a modest, but important impact on VMT and reduction in the use of autos, there are a number of studies that contradict this conclusion.

As discussed above, supporters of Smart Growth often maintain that street design—specifically an interconnected grid pattern—can reduce auto travel and encourage walking. However, a 1998 study by Crane and Crepeau concludes “there is little empirical or theoretical support for these claims...our data do not generally support the argument that the neighborhood street pattern, the single most implemented traffic feature of the new urbanism, has any significant effect on car or pedestrian travel when controlling for land uses and densities around the trip origin, trip costs, and traveler characteristics.”<sup>11</sup>

<sup>10</sup> Kenworthy, J. and P. Newman. 1993. *Automobile Dependence: The Irresistible Force?* Murdoch University, Institute for Science and Technology Policy.

<sup>11</sup> Randall Crane & Richard Crepeau, “Does Neighborhood Design Influence Travel?” University of California Transportation Center, No. 374 (1999).

In *The Weakening Transportation-Land Use Connection*,<sup>12</sup> Genevieve Giuliano, Professor of Urban and Regional Planning at the University of Southern California, concluded that transit’s influence on land use and urban development patterns was weakening. In her analysis of Portland’s LUTRAQ study, the author found that the city’s land use policies appeared to have little impact on travel outcomes. “Most of the observed change is due to the TDM (Transportation Demand Management) policies, rather than to the land use and transit policies. Without TDM, travel impacts of the LUTRAQ alternative are minor.”<sup>13</sup>

Giuliano concludes, “if the aim is to reduce environmental damage generated by automobiles, the effective remedy is to directly price and regulate autos and their use, not land use. If the aim is to reduce metropolitan spatial segmentation, the effective remedy is to expand the range of housing and employment choices, not travel choices.”<sup>14</sup>

Other studies point out that commuting times in sprawl developments are actually reduced compared to more dense settings. While the suburban commute time is not shorter in distance, it is often shorter in time due to higher speeds. And over time, the contrarians assert that new businesses will locate near residences, further reducing travel times.

Finally, critics of Smart Growth argue that state and local governments actually have lower transportation costs under a sprawl scenario because much of the cost of building and operating highways and streets is paid for by gas taxes and licensing fees. In contrast, transit users are typically heavily

<sup>12</sup> Genevieve Giuliano, *The Weakening Transportation-Land Use Connection* (1995), Access 2-10.

<sup>13</sup> *Id.* p. 8.

<sup>14</sup> *Id.* at 11.

subsidized. Additionally, an analysis of the total cost of travel for ten diverse, prototypical trips in Boulder, Colorado, showed that the automobile is clearly the least costly means of travel for trips between dispersed, low-density destinations, particularly during off-peak hours. This is true because they can take direct routes, are faster, and allow drivers to avoid waiting times. Only the auto can offer the convenience of door-to-door transportation.

### **Protection of Open Space, Agricultural Lands, and Sensitive Natural Areas**

Numerous studies have documented the significant loss of agricultural lands and sensitive natural areas to current development patterns. The leading series of studies by Professor Robert Burchell of Rutgers University looked at the comparative amounts of farmland and fragile environmental lands consumed under alternative development scenarios in South Carolina, Michigan, Kentucky, Delaware, and New Jersey. The savings ran from 20 percent to 40 percent, favoring the planned, compact development scenario.<sup>15</sup> A similar study of compact versus low-density growth in the San Francisco Bay area came up with similar results, with an even greater savings of wetlands and steep-slope areas. On the local level, there is no better example of the potential benefit of compact growth than in the State of Oregon where the adoption of urban growth boundaries and the creation of protective zones outside of them have led to the protection of 25 million acres farm and forest lands, since 1973.<sup>16</sup> Interestingly, there has been a significant loss of such lands within the growth boundaries.

A number of studies also show that the viability of farming near scattered sprawl settlements is reduced by the difficulty of farming near residential subdivisions. Real estate sales also often reduce the size of



farms, thus limiting the realization of economies of scale.<sup>17</sup>

Several case studies suggest that local open space acquisition programs have not been sufficient to offset the loss of agricultural lands associated with sprawl. About 3 acres of farmland and open space were lost for each acre acquired. This causes the amount of undeveloped open space per capita to fall at least 25 percent and sometimes more.<sup>18</sup>

**Contrary Views.** Perhaps the strongest argument against compact development from an open space perspective is that low-density development tends to provide more open space directly accessible to individual households in the form of larger private yards. Personal open space continues to be high on the list of desires of most Americans according to surveys conducted by Fannie Mae.<sup>19</sup> According to these surveys, prospective homeowners want not only yards, but also yards on all sides. Moreover,

<sup>15</sup> See, for example, Robert W. Burchell, "South Carolina Infrastructure Study: Projections of Statewide Infrastructure Costs 1995-2015" (1997).

<sup>16</sup> "Once There Were Greenfields," Natural Resources Defense Council and Surface Transportation Policy Project, 1999.

<sup>17</sup> Burchell, et al, The Costs of Sprawl – Revisited, Transportation Research Board (1998), p. 75.

<sup>18</sup> Discussed in Clarion Associates, "The Costs of Sprawl in Pennsylvania," January 2000, p. 42.

<sup>19</sup> "Survey of Residential Satisfaction of Housing Occupants," Washington, D.C.: Federal National Mortgage Association (1985-96).

current surveys also indicate that single-family detached housing is more popular than it was a decade ago.

### **Reduces Public Infrastructure Investment Costs**

There is strong evidence from around the nation that Smart Growth development patterns result in lower costs to build public

infrastructure. Three major research studies have concluded that construction costs for roads, utilities, and schools can be up to 25 percent lower under planned growth, compact development scenarios that avoid sprawl. These findings are summarized in the following table:

<b>Relative Construction Costs for Public Infrastructure Under Sprawl versus Planned/Compact Development</b>					
<b>Infrastructure Cost Category</b>	<b>Sprawl Development Cost Index</b>	<b>Planned Development Cost Index (% Relative to Sprawl)</b>			<b>Planned Development Blended Cost Index (% Relative to Sprawl)</b>
		<b>Duncan</b>	<b>Burchell</b>	<b>Frank</b>	
<b>Roads (Local)</b>	100%	40%	74-88%	73%	75%
<b>Utilities (Sewer/Water)</b>	100%	60%	86-93%	66%	80%
<b>Schools</b>	100%	93%	97%	99%	95%
<b>Other (Police, Fire, and Rescue Stations)</b>	100%	102%	N/A	100%	100%
Sources: <i>Economic and Fiscal Costs (and Benefits) of Sprawl</i> , Robert W. Burchell; 29 <i>Urban Lawyer</i> 2, p. 159 (Spring 1997); Robert W. Burchell studies (1992-1997); James Duncan, "The Search for Efficient Urban Growth Patterns," Florida Department of Community Affairs (July 1989); and James Frank, "The Costs of Alternative Development Patterns," Urban Land Institute (1989).					

In her study, *The Economics of Urban Form*, Pamela Blais estimates that in the Toronto region, if the present low-density form of development continues (26 persons/acre), future growth will require \$90 billion in capital investment in new infrastructure over the next 25 years. Alternatively, the study found that if more compact urban forms (60 person/acre) were adopted, the Toronto region could save between \$700 million and \$1 billion in external costs associated with emissions, health care, accident policing, and capital, operating, and maintenance costs.

On a more local basis, many studies from different jurisdictions demonstrate that residential development typically does not "pay" its own way in terms of services demanded compared to local tax revenues. For example, a study of eleven rural

Pennsylvania townships showed that, on average, township expenditures for community services and schools for residential land outweighed the revenues the townships received from such use. The order of magnitude of this negative fiscal impact ranged up to 1:2 (for every \$1 in revenues, \$2 in expenditures). Another study from Pennsylvania conducted by Tischler & Associates of Maryland assessed the fiscal impact of providing township services under three different residential development scenarios.<sup>20</sup> The urban infill scenario (with lot sizes of 5,000 to 15,000 square feet) resulted in tremendous cost savings compared to a "sprawling subdivision" alternative (scattered subdivisions of 1 acre average) or a

<sup>20</sup> Paul Tischler, "Fiscal Impact Analysis of Residential Development Alternatives, Lancaster County, PA" (1993 & 1998).

“sporadic development” scenario (random development pattern with lots from ¼ to 20 acres). The annual deficit per household was \$40 for urban infill, \$147 for the sprawling subdivision, and \$1,133 for sporadic development.

### Contrary View

A number of studies point out correctly that operating costs for road maintenance and schools in older cities are much higher than in suburban communities. As concluded in the Cost of Sprawl—Revisited (1998), the research “indicates that without taking into account what services are delivered and by whom—operating costs, whatever they are comprised of, appear to be less in jurisdictions of low density than in jurisdictions of high density.”<sup>21</sup>

Additionally, Smart Growth skeptics assert that infrastructure costs for sprawl development may be higher initially, but could diminish over time with infill.

### **Promotes Quality of Life and Community Character**

A variety of studies and reports assert that Smart Growth development promotes a higher quality of life and community character in a number of ways:

- Compact higher density developments are more attractive
- Sprawl development patterns lead to a weakened sense of community
- Compact development patterns lead to less air and water pollution
- Sprawl development increases stress and leads to a less healthy lifestyle
- Smart Growth helps protect historic resources.

Critics of low-density, dispersed development decry its ugliness. Visual

<sup>21</sup> Burchell, et al, The Costs of Sprawl – Revisited, Transportation Research Board (1998), p. 75.

preference surveys that have been used to gauge the reaction to sprawl typically show that individuals favor traditional communities over sprawl developments. On the other hand, the literature fails to indicate any significant causal relationship between sprawl and aesthetically less-pleasing low-density development. Indeed, in one survey in the early 1990s, Americans favored homogeneous neighborhoods over mixed ones by a margin of two to one.<sup>22</sup>



On the other hand, there is more evidence that low-density developments do weaken a sense of community or make building a sense of community more difficult. One study showed that residents in low-density areas rely more on their cars for shopping and recreation trips and thus are less likely to develop contacts and friendships with neighbors.<sup>23</sup> Another study assessed the psychological sense of community across different neighborhoods and housing conditions in Columbus, Ohio, and found that residents of mixed-use areas had significantly more sense of community than residents of single-family neighborhoods.<sup>24</sup>

<sup>22</sup> L. Bookout 1992. “Neotraditional Town Planning: The Test of the Marketplace.” *Urban Land* 51, 6: 12-17.

<sup>23</sup> Nasar, Jack L., and David A. Julian. 1995. “The Psychological Sense of Community in the Neighborhood.” *Journal of the American Planning Association* 61, 2: 178-184.

<sup>24</sup> Thomas Glynn. 1981. “Psychological Sense of Community Measurement and Application.” *Human Relations* 34, 7: 789-818.

Having said that, evidence from as far back as the 1950s (Herbert Gans) indicates that some dense areas lack community while some suburban areas have it.

Experience does show that Smart Growth development patterns are likely to result in less air and water pollution. The current rates of VMT growth in Maryland and nationally, and the increase in the number of auto trips that are associated with outlying low-density development, are significant contributors to ozone and other air pollutants. Much of the air pollution from automobile trips comes in the few minutes after the engine starts—up to 64% by U.S. EPA estimates. By eliminating short trips, compact development can significantly reduce such emissions.

With regard to water pollution, a technical study of the Chesapeake Bay and Watershed showed that a concentrated development pattern would result in reductions of up to 50 percent in sedimentation, nitrous oxides, and water consumption compared to a dispersed/sprawl pattern.<sup>25</sup>

Several studies have also made the case that suburban sprawl development patterns are less healthy. Environmental health experts at the Centers for Disease Control and Prevention recently published a report that asserts suburbs are designed in such an auto-oriented fashion that residents don't participate regularly in physical activity like biking and walking.<sup>26</sup> This was particularly true of school children who are far less likely to walk or bike to school than 20 years ago. Less exercise leads to obesity and associated physical ailments. The same

study chronicled the problems of air pollution associated with increased auto travel and increases in VMT. Increased air pollution has had serious adverse health effects, for example, increasing the incidence of asthma. The report concludes, "it seems imperative that new transportation options be developed and implemented in order to help alleviate the public health problems related to worsening air quality..." Other studies cite stress related to longer commuting times as another adverse health effect of low-density sprawl development.

#### Contrary View

On the other hand, the National Association of Homebuilders has severely criticized some of these reports, pointing out that the Centers for Disease Control and Prevention published another study in September 2001 that showed suburbanites are the healthiest people in the country, exercising more and living longer than residents of rural and urban areas.

Moreover, critics of Smart Growth point out that sprawl suburban development typically has lower crime rates than more dense urban developments. Statistics do appear to indicate that urban residents experience higher rates of crime than their suburban or rural counterparts. However, other research has found that there is no significant relationship between crime and density.



<sup>25</sup> Burchell, et al, "Water Pollution Impact Technical Report," Governor's Commission on Growth in the Chesapeake Bay Region, Maryland Office of Planning (1991).

<sup>26</sup> Richard Jackson & Chris Kochtizky, "Creating A Healthy Environment: The Impact of the Built Environment on Public Health," Sprawl Watch Clearinghouse (2002).

## Responds to Diverse Housing Needs

As documented in the companion report to this study, *Characteristics of the 21<sup>st</sup> Century Workplace: Land Use Implications for Montgomery County*, no single type of housing can serve the varied needs of the diverse households that are expected to emerge in the 21<sup>st</sup> Century. Advocates maintain that Smart Growth development will address this situation in several ways. First, mixed-use developments will be designed to provide a range of housing types—single family, townhomes, and multifamily on a variety of lot sizes. Second, because Smart Growth developments tend to be denser, housing within them will be more affordable.

These arguments are supported by major studies by Professor Burchell that focused on New Jersey and Michigan.<sup>27</sup> They are the only studies to look at overall housing costs in a larger area governed by managed growth (at the state or regional level), where development would be restricted in certain locations (e.g., environmentally sensitive lands) will encouraged in others (areas with existing or excess infrastructure capacity). These large-scale studies developed housing cost models to estimate the likely housing price increases in the more restricted outlying areas and the likely housing price decreases in targeted growth areas (due to their inherent higher densities and the proposed housing type mix—e.g., more attached housing). Under the planned development scenarios in Burchell's studies, more housing would be built in core areas than in more rural, outlying areas. The studies concluded that overall private

housing costs under the planned growth scenarios would be between 2 percent and 8 percent lower than under the sprawl development scenarios. Thus communities and regions concerned with the affordability of their housing stock could realize savings through the use of less land per home.

## Contrary View

In contrast, several studies conducted in the 1980s found that the imposition of residential growth controls, such as annual building permit caps, does have an adverse impact on housing prices compared to homes located in similar communities without such controls.<sup>28</sup> However, these studies only focused on land use controls that constricted supplies, not Smart Growth programs that promoted housing development in existing areas while restricting it on the periphery.

## IV. POLITICAL AND MARKET ACCEPTANCE OF SMART GROWTH

The weight of evidence to date demonstrates that Smart Growth can indeed have positive impacts on traffic reduction, open space preservation, and other benefits. But what about the politics of Smart Growth—do state and local officials have the stomach to impose regulations that mean changing the way the development business operates? And what of consumers—do they prefer Smart Growth developments over the low-density, sprawling development patterns that have predominated the last 30 years?

A number of new design concepts have emerged in recent years that promote many of the Smart Growth development principles. Transit-oriented development

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<sup>27</sup> Burchell, Robert W. 1992b. *Impact Assessment of the New Jersey Interim State Development and Redevelopment Plan, Report III: Supplemental AIPLAN Assessment*. Trenton: New Jersey Office of State Planning; and Burchell, Robert W. 1997a. *Fiscal Impacts of Alternative Land Development Patterns in Michigan: The Costs of Current Development Versus Compact Growth*. Southeast Michigan Regional Council of Governments.

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<sup>28</sup> Cited in Clarion Associates "The Costs of Sprawl in Pennsylvania," Denver, CO (2000), p. 26.

(TOD), new urbanism, and neo-traditional neighborhoods are the most popular design concepts that support the underlying principles of mixed use, compact development, and high density infill housing.



This section discusses the political obstacles to Smart Growth, market acceptance of certain Smart Growth features and new design concepts like neo-traditional development, and the development community's skepticism about Smart Growth development.

### Political Obstacles

Although an increasing number of local elected officials and planners support the concept of Smart Growth, there are a number of concerns that they must deal with. These include federal regulations, pressures for economic development, property rights advocates, and NIMBYism, that often dominate local policy making, and ultimately become barriers to Smart Growth.

At a national conference on Smart Growth sponsored by the Urban Land Institute,<sup>29</sup> Terry Kauffman, Chairman of the Board of Commissioners for Lancaster County, PA, cited the following political barriers to Smart Growth in his community:

- Liability issues and remediation costs associated with the redevelopment of brownfields
- Lack of sufficient funds for both the preservation of agricultural land in the rural areas and investment in infrastructure in the urban areas
- A costly and time-consuming development approval process
- Over 200 years of development patterns and the perception that there is unlimited land that can be built upon

In the same discussion on political obstacles to smart growth, the Mayor of Fort Wayne Indiana, Paul Helmke, identified these hurdles to implementing Smart Growth in his city:

- An anti-urban attitude contained in many federal and state statutes that can hamper Smart Growth efforts. For example, the City of Fort Wayne established a special tax district in its city limits to raise the funds necessary to implement the changes necessary to comply with the stormwater runoff standards of the Clean Water Act. An unintended consequence of this policy is to make it significantly less expensive for a new business to establish itself in the suburbs of Fort Wayne rather than in the city itself.
- Another example is the non-attainment sanctions under the Clean Air Act, which have the unintended effect of promoting growth outside of the non-attainment area, e.g., greenfields development. And finally, the liability laws under the Superfund law that can hold new property owners liable for the clean up of contamination caused by

<sup>29</sup> Urban Land Institute, National Policy Forum, Smart Growth Policy and Practice. Nov. 19, 1998. Meeting Summary Notes. ([http://www.uli.org/Pub/Pages/a\\_issues/A\\_SmL5Nat2.htm](http://www.uli.org/Pub/Pages/a_issues/A_SmL5Nat2.htm))

previous owners -- significant deterrent to brownfield development.

- Economic development. Some communities have not shared in the economic boom of the 1990s and are loath to take any steps that may hurt their economic viability. Many people would say, "I want Smart Growth, but I prefer some growth to no growth."

### Community Resistance & NIMBYism

Because smart growth developments represent a significant departure from conventional zoning and development practices in some communities, mixed-use developments with higher density housing have at times encountered significant opposition from neighbors and residents. People generally associate higher density and affordable housing with urban problems, and therefore, are suspicious of proposals that incorporate these elements. Without strong leadership promoting the benefits of



Smart Growth projects are often rejected or significantly modified.

Another issue for residents is the housing diversity of Smart Growth development. As discussed earlier, housing diversity combined with higher densities and mixed uses, serves the larger objective of creating

walkable, pedestrian-friendly neighborhoods, and reducing traffic.



However, because diversity requires mixing housing types and prices, this may be one of the hardest barriers to overcome, according to New Urbanist Peter Calthorpe. The principle of diversity "advocates mixing income groups in a way that is very frightening to many communities:...it is a principle that is rarely realized in practice and...almost always compromised."<sup>30</sup>

The generalized nature of a mixed-use project, and the flexibility that it must include may also generate concerns about the final product.<sup>31</sup> Many developers have had to make substantial concessions, usually by reducing density, cutting the number of multifamily units, and eliminating some street connectivity with the new development, to satisfy the concerns of NIMBY residents who often prefer the

<sup>30</sup> Peter Calthorpe, *New Urbanism, A Blueprint For Building A Better Neighborhood*, *Denver Post*, April 26, 1998, cited in Mark, Reilly, *Neo-traditional Development*, Land Use Law Center, Pace University, [www.law.pace.edu/lawschool/landuse](http://www.law.pace.edu/lawschool/landuse)

<sup>31</sup> Eric M. Braun, *Growth Management and New Urbanism: Legal Implications*, *The Urban Lawyer*, 817, 818 (Fall 1999).

privacy and exclusivity of a typical suburban development.<sup>32</sup>

In other cases, public resistance may be due to previous bad experiences with mixed use projects. For example, when Colorado Springs, Colorado, began revising its zoning code to include new mixed use districts, the proposals were met with skepticism from some residents whose only experience with mixed-use had been seeing the city approve conversions of older houses in their neighborhoods to commercial uses with adverse consequences in terms of noise, lighting, signage, and parking. Because the city failed to adopt any residential protection standards or guidelines or establish appropriate transition areas the residents were less than enthusiastic with the concept of "mixed use".

Experience in other communities around the nation shows that there are several inherent problems with integrating diverse uses, because the characteristics of these uses are often incompatible with each other. These incompatible characteristics can create frustration from residents as well as retail and commercial tenants. For example, when housing units are located on floors above retail and commercial spaces, residents often complain about noise and odors. Those complaints are often directed at elected officials who approved the developments.

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<sup>32</sup> Id. In fact, "several proposed developments in North Carolina have been substantially revised or defeated due to citizen opposition" relating to small lot size and commercial development. It is worth noting that TND ordinances are flexible enough to allow creative resolutions to issues like privacy. For example, the project of Orenco required residences to be built three feet above sidewalk level so that passersby could not see into the first floor windows. See Christina Farnsworth, *Building Community*, *Professional Builder*, Oct. 1998 at 58 (noting that the developers of Harbor Town, a neo-traditional neighborhood near Memphis, TN, became private in order to escape the constraints of the municipal land use ordinance).

## Consumer and Market Acceptance

Smart Growth's compact development policies affect housing density, as well as the type of housing products that are built. While many planners have embraced Smart Growth, the question remains whether the average homebuyer or renter will. Put another way, will the benefits of a smart development--proximity to transit, walkable neighborhoods, reduced congestion, and high quality design--be enough to offset the lure of traditional suburban living -- large



yards, quiet streets, and privacy? Based on a review of current literature and consumer preference surveys, the conclusion is....the verdict is still out. While a number of mainstream surveys continue to show that Americans prefer the wide open spaces of suburbia over denser, mixed-use development, there is growing evidence that Smart Growth is appealing to an increasing number of people, particularly aging baby boomers.

On the mainstream side, several recent studies indicated extremely strong preferences for suburban versus other development patterns. Eighty-three percent of respondents to a 1999 National Association of Home Builders (NAHB) Smart Growth Survey preferred a single-family detached home in the suburbs, even if it required a longer commute than a

similarly priced town house in the city.<sup>33</sup> And 73 percent of respondents to a 1995 American LIVES survey which was part of a New Urbanism study preferred suburban developments with large lots and wide streets to residential urban areas, including narrower streets, sidewalks, and shared recreational areas. Similarly, an Orange County, California, survey found that residents preferred open space and living far from the urban core, and were willing to give up proximity to jobs in return for the amenities of the suburban environment (e.g., safety, privacy, tranquility).<sup>34</sup>

Another conventional finding is that housing consumers prefer single-family detached units over all others. This was confirmed in a 1997 Fannie Mae National Housing Survey. Moreover, in the 1999 NAHB survey, 78 percent of respondents were opposed to apartments in their predominantly single-family neighborhoods.

Finally, other surveys show that housing consumers typically prefer lower densities. Preferences ranged from 63 % to 75 % in a host of surveys over the past decade. Also, the average square footage of new homes has increased from 1,800 in 1985 to 2,100 in 1997 -- and larger homes usually require larger lots.

According to William Fulton, contributing editor of *Planning* magazine, there are several reasons why it has been so difficult to gain market support for the neo-traditional, compact, higher-density neighborhood. First, the housing products are so "radically different from those that have dominated the residential real estate market for the last half-century", they

simply don't conform to the "well established set of expectations about what houses and neighborhoods will deliver".<sup>35</sup> Second, neo-traditional projects are sold on the provision of high quality amenities and a diversified, mixed-use community. When these amenities have not been installed in the early phases, projects have suffered. Fulton cites Laguna West, California, as an example of how poorly timed phasing resulted in scattered streets and isolated land uses that made it difficult to create a sense of community.<sup>36</sup>

But other studies and surveys show that the preference for a single-family home in the suburb on a big lot is far from universal. Housing expert Dowell Myers asserts that changing demographics are already creating a strong fan club for Smart Growth developments:

"The growing demand will be the result of changing demographics, changing tastes, and the closing of the suburban frontier. Americans are getting older, and fewer households have children. Both of these demographic trends contribute to growing demand for more varied housing choices."<sup>37</sup>

The US population, age 55 and older, is expected to represent over 29% of the population by the year 2020. As "empty-nesters", this segment of the population will likely downsize its housing needs and opt for more locational convenience. A 1998 survey of the Baby Boomers, from Fannie Mae, indicated that while the majority, 53% would remain in their current home, 35%

<sup>33</sup> Discussed in Michael Carliner, "Comments on Current Preferences and Future Demand for Denser Residential Environments," *Housing Policy Debate*, Vol. 12, #4 (2001).

<sup>34</sup> C. Kenneth Orski, *Suburban Sprawl - Can We Do Anything About It?* Urban Mobility Corporation, Vol. 10, No1: Planning, Research & Evaluation. Jan/Feb. 1999, p. 3.

<sup>35</sup> William Fulton, *New Urbanism, Hope or Hype for American Communities?* Policy Focus Report. Lincoln Land Institute. 1996.

<sup>36</sup> Id.

<sup>37</sup> Dowell Myers, et al, *The Coming Demand*, Congress for the New Urbanism (2000) p. 3.

would sell and either buy or rent a new home.<sup>38</sup>

It is also important to note that a small but significant percentage of housing consumers prefer an urban or town residential style to a conventional suburban residential style -- 17% in the 1999 NAHB to 33% in the American LIVES survey. Similarly, some housing consumers actually prefer higher density as indicated by a preference for smaller lots or clustered development -- from 37% in a 1998 Professional Builder survey to 57% in the NAHB survey. Based on such statistics and demographic trends, Myers predicts "these preferences will add greatly to the growing market impact of home seekers who prefer compact-city alternatives."

Other surveys reveal that young families with children have a pronounced preference for sidewalks, smaller lots with smaller front yards, pedestrian oriented streets, and higher-density housing with houses on smaller lots close to the street—but often in a suburban context, not necessarily an urban environment. A study in Kentlands, Maryland, concluded that residents paid 30% more for their homes compared to nearby subdivisions as a premium to live in a neo-traditional community with its pedestrian-friendly amenities.<sup>39</sup>

With respect to infill development, a 1998 study by the Brookings Institute and Fannie Mae, found that one of the fastest growing housing markets in the United States was downtown housing. Houston expected its

downtown housing to quadruple by 2010, and Cleveland expects it to triple. Denver, Seattle and Memphis are all expecting to double their downtown residents in the next 10 years.<sup>40</sup>

What to make of these conflicting studies and preference surveys? John Bailey and Elizabeth Humphrey perhaps summed up best in *Housing Policy Debate*, a Fannie Mae periodical:

"For most of us, the American Dream does include a single-family home with its own yard, a cheap and safe place to put our car(s), and neighbors we can visit only if we want to. But as this study points out, our preferences change over a lifetime, and a significant and growing number of Americans have a different dream. For some, the convenience and amenities of urban apartments or town house neighborhoods are very appealing. Others may want affordable rental housing. In the most consumer-oriented economy in the world, we should be able to figure out how to bring those dreams within reach too."<sup>41</sup>

### **Development Community Reluctance**

Compact residential growth and mixed-use development are hallmarks of Smart Growth--and probably some of the more difficult design concepts for developers to produce. From the developer's perspective there are a number of barriers to developing compact residential projects or a mixed-use product, including financing, costs, inflexible regulations, and community resistance. As one prominent housing expert recently observed:

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<sup>38</sup> John Niles and Dick Nelson, *Measuring the Success of Transit-Oriented Development*. American Planning Association. National Planning Conference (1999) at 6.

<sup>39</sup> Joe Gyourke, *Financing New Urbanism Projects, Obstacles and Solutions*. Housing Policy Debate. Vol. 11, Issue 3. Fannie Mae Foundation 2000. 740., citing Mark Eppli and Charles Tu, *Valuing New Urbanism: The Impact of the New Urbanism on Prices of Single-family Homes*. Urban Land Institute. 1999.

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<sup>40</sup> Edward McMahon, *Looking Around*. Planning Commissioners Journal. No. 39 (1999) pp. 4-5.

<sup>41</sup> Vol. 12, Issue 4 (2001) p. 666.

“Conventional development is well-understood, relatively easy to finance, simple to build, and modular in nature so it does not need to be related to the surrounding built environment. Relative to more compact residential development, these are daunting challenges.”<sup>42</sup>

### Financing

Probably the greatest difficulty in financing a mixed-use project is perception by lenders and investors that the complexity of integrating uses, particularly in the suburbs, raises the risk level. Complexity also equates to the uniqueness of a project, which is defined as a “nonstandard investment” and attached with significant return premiums. In a survey of financiers, developers and investors, conducted by the Wharton School of Business, to determine whether financing practices affected New Urbanism developments, respondents emphasized “it is difficult to accurately predict the demand for projects with multiple property types – whether there are New Urbanist features involved or not.”<sup>43</sup>

The bottom line is that lenders are reluctant to finance and underwrite a project that has relatively little “real life” experience.<sup>44</sup> The complexity of a mixed-use development also raises concerns that highly skilled, experienced project management is needed in order to properly phase the development and oversee cash flow. Since most developers specialize in single use products, they are perceived to lack the proper skills required for this type of project.<sup>45</sup>

<sup>42</sup> Christopher Leinberger, *Financing Progressive Development*, The Brookings Institution (Washington, D.C., 2001).

<sup>43</sup> Id.

<sup>44</sup> See Fulton, at note 11 “The amenities of neo-traditional development – walkable streets, public spaces and a sense of community, are not as easy to quantify as large lots and views. Consequently, lenders are reluctant to becoming involved with a product, albeit innovative, that doesn’t have a proven track record.”

<sup>45</sup> See, *Financing New Urbanism*, infra. note 15 at 40.

Some respondents to the Wharton study expressed concerns with the apparent lack of market demand for the New Urbanism products. For many lenders and investors, the negative perception of density and multi-family housing in the suburbs, combined with NIMBYism problems, creates additional risk premiums for neo-traditional developments.<sup>46</sup>

### Retail Market Demands

Commercial market realities also present challenges to Smart Growth precepts of compactness, small scale, and diversity of building types. Strong retail market trends are producing facilities on a much larger scale than seen even a decade ago – the so-called “big box phenomena.”<sup>47</sup> According to a number of studies, lenders are skeptical about financing smaller scale elements of mixed-use development.<sup>48</sup>

The same kinds of market qualms has also affected financing for retail uses near transit stations--usually due to the fact that the location proposed for the retail fails to satisfy basic market criteria such as clustering, good visibility, easy access and parking.<sup>49</sup>

### Overall Development Costs

Another difficulty developers have with mixed-use projects is the cost associated with building at higher densities. Although there are savings associated with smaller lots, multiple uses or multiple types of a use (apartments, townhouses, detached houses), means that the economies of scale associated with mass producing one commodity cannot be realized.<sup>50</sup> In addition, the nonstandard

<sup>46</sup> Id.

<sup>47</sup> C. Duerksen & R. Blanchard, “Site Planning For Large Retail Establishments,” *Zoning News*, American Planning Association (Feb. 1999).

<sup>48</sup> *Financing New Urbanism*, infra note 15 at 739.

<sup>49</sup> *Measuring the Success of Transit-Oriented Development*, American Planning Association. infra note 14 at 13.

<sup>50</sup> *Financing New Urbanism*, infra note 15 at 738.

nature of many mixed-use developments means that the traditional engineering practices cannot be applied. Infrastructure investment required by smart developments is also more elaborate (e.g., alleys, and sidewalks), and thus more expensive than that found in more traditional suburban projects. It should be noted, however, that neither equity investors nor lenders experienced in neo-traditional development perceive extra utility and infrastructure costs as a major obstacle to the financing of a well-planned project.<sup>51</sup>

#### Regulatory Obstacles

Another obstacle to mixed-use projects has been the regulatory and procedural difficulties associated with obtaining local government approval. In some instances, zoning and building standards present roadblocks to compact, mixed-use projects or allow too much discretionary decision-making. In Longmont Colorado, for example, Kiki Wallace's request to modify the city's street width requirements turned into a three-year battle with City agencies and cost the project its affordable housing component.

Wallace designed Prospect, a 500-unit residential development, using neo-traditional design principles, including smaller lots, off-street parking, sidewalks and alleys, including a variety of housing types and prices. Wallace intended to keep a portion of the homes at a very "affordability" level, even though there was no mandate to do so. However, after requesting a reduction in the city's road width standards from 36 feet to 20 feet, he ended up spending 3 years battling with the city's fire department and transportation engineers before getting approval. The delay and

costs associated with that modification not only cost Prospect its affordable units, according to Wallace, it raised the home prices in the entire development.<sup>52</sup>

## V. CONCLUSIONS

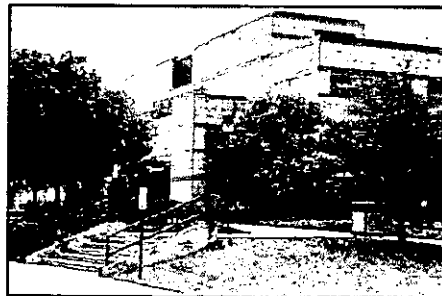
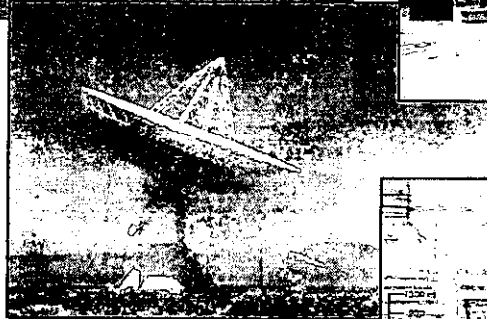
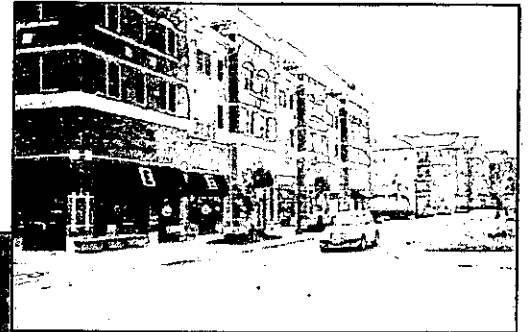
There is an increasing body of evidence and studies that demonstrate some of the clear benefits of Smart Growth. The evidence is particularly strong and convincing in the areas of reducing public infrastructure costs and preservation of open space. Studies also show it can have an important role in reducing traffic congestion. However, those benefits are still being debated in this development community and have not been translated into strong developer acceptance at this point.

Fortunately, there are increasing indications that housing consumers, particularly baby boomers, are coming to appreciate the benefits and convenience of living in Smart Growth development and there is substantial, project-by-project evidence from across the United States, particularly in urban and suburban jurisdictions, that mixed-use developments can succeed in the market. Perhaps of even more importance, is the evidence that developers and financial institutions are learning the ropes of mixed-use projects and other key elements of Smart Growth development patterns -- and that Smart Growth can be a good investment for smart money.

<sup>51</sup> *Financing New Urbanism*, infra note 15 at 738.

<sup>52</sup> Matthew Goebel, *Reducing Housing Costs Through Regulatory Reform: A Handbook For Colorado Communities*, Colorado Division of Housing, Department of Local Affairs. (1998) p. 41.

# **CHARACTERISTICS OF THE 21ST CENTURY WORKPLACE: LAND USE IMPLICATIONS FOR MONTGOMERY COUNTY, MARYLAND**



**PREPARED FOR:**

**THE MARYLAND-NATIONAL CAPITAL PARK  
AND PLANNING COMMISSION**

**SUBMITTED BY**

**CLARION ASSOCIATES OF COLORADO, LLC**

1700 BROADWAY, SUITE 400

DENVER, COLORADO 80290

303/830-2890

303/860-1809 FAX

CLARION@CLARIONASSOCIATES.COM

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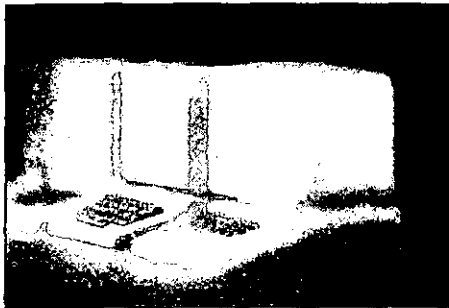
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# CHARACTERISTICS OF THE 21<sup>ST</sup> CENTURY WORKPLACE: LAND USE IMPLICATIONS FOR MONTGOMERY COUNTY, MARYLAND

Clarion Associates  
April 2002

## I. INTRODUCTION

Over the past 20 years, a "New Economy" has emerged, representing an historic shift from manufacturing-based to knowledge-based firms. The New Economy is technology driven and global. It has already begun to

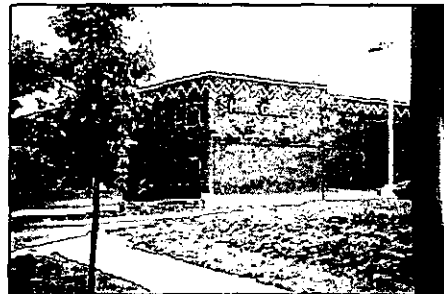


restructure metropolitan and urban economies. The firms driving the New Economy have markedly different locational preferences from those that ran the economy two decades ago. The workplace of the 21<sup>st</sup> Century that is emerging from this shift promises to be markedly different as well. These forces will have a dramatic impact on land use and development preferences and trends throughout the country.

This report, part of a zoning code rewrite project initiated by the Montgomery County Council and the Montgomery County Department of Park & Planning of the Maryland-National Capital Park & Planning Commission, focuses on the land use implications of the 21<sup>st</sup> Century workplace. First, it presents an overview of some of the characteristics of the New Economy such as global commerce,

flexible employment systems, and volatile markets. A grasp of these characteristics helps to understand the forces at play that affect development at the local level.

Next, the report discusses the regional locational preferences of growth firms in the technology sector—biotechnology enterprises, software/internet development firms, and high-technology manufacturers.<sup>1</sup> In the past, factors such as cost of labor, tax rates, and similar forces were prime considerations for businesses considering expansion or relocation. Today, issues such as quality of life, availability of technology



<sup>1</sup> Biotechnology is the application of scientific knowledge to transfer beneficial genetic traits from one species to another to enhance or protect an organism. Biotechnology firms include non-profit and for-profit institutions and companies that conduct research, testing, and clinical treatment. They produce medical devices and chemicals. Some for-profit firms are manufacturing pharmaceutical products or treatments (e.g., artificial insulin). Biotech firms/institutions in Montgomery County include Gene Logic, Human Genome Sciences, Inc., United Therapeutics Corp., Medimmune, BioReliance, Diagon, Genetic Therapy, Inc., and IGEN. Software/internet firms vary tremendously in their products and services. Some produce software for commercial use; others provide internet support services to other businesses. Examples in Montgomery County include GE Information Systems, ecentives.com, bid4assets.com, and CityNet Telecommunications. High-tech manufacturing companies are typically marked by large research and development budgets and production of high-value products such as optical equipment or specialty medical products. Examples in Montgomery County include Acterna (telecommunications), ACE Communications, and Capital Electro Circuits.

infrastructure, and expeditious permit reviews are far more important to firms in growth sectors. Local governments must be aware of and respond to these new preferences if they are to be competitive.

Third, the report looks at what these firms and their employees are demanding in terms of site development and workplace configuration. The isolated suburban office park featuring headquarter buildings in a sprawling



campus setting—typical of the 1960s and 1970s—is giving way to a different sort of business park and work environment in the 21<sup>st</sup> Century that reflects the needs of the New Economy. Firms and their workers are demanding new amenities, a variety of housing choices, and better transportation access. Again, the land use implications for local governments promise to be significant and suggest some important changes that must be made in local land use and zoning regulations and processes.

The report concludes with a list of potential responses Montgomery County should consider in revamping its land development codes that will help it to better address the changing locational and workplace preferences of firms in the technology sector. In doing so, the report draws on experience in other comparable metropolitan areas such as Seattle, Portland, San Diego, Fort

Collins, Colorado, and Cary, North Carolina (Research Triangle area).

## II. A SNAPSHOT OF THE FORCES SHAPING THE NEW ECONOMY<sup>2</sup>

Much has been written about the so-called “New Economy,” often accompanied by a large dose of hype. But clearly the national economy is not what it used to be. The global economy and rise of information technology have dramatically reshaped the economic landscape. In the past, large Fortune 500 corporations often shaped our economic future. But net job growth of the



Fortune 500 in the last decade has been zero! Today, 80% of the labor force is working for firms employing fewer than 200 people. The number of self-employed, part-time, and temporary

workers has skyrocketed. These smaller economic units have different locational and workplace needs than firms that gravitated to massive, big-box office buildings and sprawling campus complexes.

A recent study prepared for the James Irvine Foundation, “Linking the New Economy to the Livable Community,” compared the industrial era leading up to the 1990s with today’s knowledge era. The study summarized some of the most significant shifts in where we work and how:

<sup>2</sup> This report draws on a variety of sources, including major research reports and other publications referenced throughout and in Section VI.

COMPARING ECONOMIC ERAS				
	Basis of Competitive Advantage	Where We Work	How We Work	Place
<b>Knowledge Era (1990s-Future)</b>	<b>Flexible Specialization</b> <ul style="list-style-type: none"> <li>• Knowledge</li> <li>• Quality</li> <li>• Speed</li> <li>• Flexibility</li> <li>• Networks</li> </ul>	<b>Variety</b> <ul style="list-style-type: none"> <li>• Large, decentralized companies</li> <li>• Fast-growth, nimble smaller companies</li> <li>• Home-based businesses</li> <li>• Independent contractors</li> </ul>	<b>Variety, Integration</b> <ul style="list-style-type: none"> <li>• Knowledge workers changing jobs</li> <li>• Reintegration of work and home</li> </ul>	<b>Integrated Region</b> <ul style="list-style-type: none"> <li>• Economic regions</li> <li>• Distinctive quality of life</li> <li>• Vital centers</li> <li>• Choice for living and working</li> <li>• Speed and adaptability</li> <li>• Natural environment</li> </ul>
<b>Industrial Era (1940s-1980s)</b>	<b>Mass Production</b> <ul style="list-style-type: none"> <li>• Low cost</li> <li>• Quantity</li> <li>• Stability</li> <li>• Capital equipment</li> <li>• Control</li> </ul>	<b>Factory Model</b> <ul style="list-style-type: none"> <li>• Large organizations, vertically integrated</li> </ul>	<b>Certainty, Separation</b> <ul style="list-style-type: none"> <li>• Hierarchy</li> <li>• Distinct workplaces</li> <li>• Separation of work and home</li> <li>• Single career path</li> <li>• Lifetime employment</li> </ul>	<b>Dispersion and Isolation</b> <ul style="list-style-type: none"> <li>• Subdivisions</li> <li>• Technology parks</li> <li>• Office parks</li> <li>• Greenfield plants</li> <li>• Edge cities</li> <li>• Shopping centers</li> </ul>

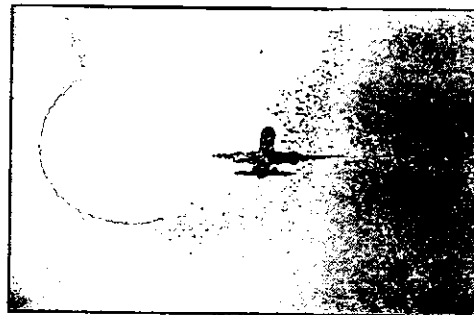
Source: Henton and Walsh, "Linking the New Economy to the Livable Community," The James Irvine Foundation, April 1998.

As the authors of the Irvine Foundation report observe, the New Economy is just not about making computers or microchips. "The New Economy is about speed, quality, flexibility, knowledge, and networks. It is about applying knowledge and new ways of doing business to a wide range of products and services...." While the term New Economy means different things to different people, there is general agreement it has some important characteristics that distinguish it from previous times. As will be discussed in later sections, these characteristics help influence where firms want to locate and how the sites they develop and workplaces they build must function.

#### **Globalization and Deregulation:**

Global commerce forced many American companies to come out of isolation and compete with overseas

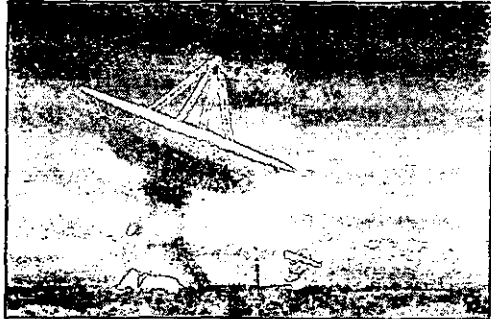
firms. Free trade barriers were removed, and goods, services, and human capital began flowing freely around the world. One of the unintended consequences was the shake up of many large U.S. corporations previously protected from global competition. At home, deregulation of many industries such as the airlines, telecommunications, and banking has created new competition in many markets. The 2000s will witness increasing micro-segmentation of markets by more highly specialized businesses.



### **Technology and Automation:**

Technology and automation transformed the way many businesses operated.

Personal computers, cell phones, e-mail, and fax machines all rapidly emerged to transform business practices. They have



made alternative work arrangements more feasible and even desirable. A growing number of companies do not focus on work-at-home policies, preferring to think about "work anywhere, anytime programs."

### **Volatile Markets:**

As the technology sector has become more dominant in the economy, the economy is increasingly more vulnerable to the inherent volatility of that sector. Today's high-flyer products are tomorrow's obsolete gadgets.

Businesses must gear up quickly to translate ideas into new products or risk missing the market window. "Time to market" is the governing imperative. Transactional costs (the cost of obtaining resources and meeting deadlines) tend to be more important than input costs (the cost of labor and materials), and firms will pay more in terms of wages and land costs to operate in such an environment.

### **Flexible Employment Systems:**

In the new economic order, businesses have learned how to react quickly to market shifts, shedding or building capacity, shrinking or expanding space, and downsizing or gearing up

workforces. Firms hire more people when orders and revenues increase, and downsize when business drops off.

Many U.S. companies utilize a flexible employment system that consists of many temporaries, contractors, and consultants. As a consequence, loyalty to firms has eroded.

### **Free-Agent Employees:**

Accompanying flexible employment systems are free-agent employees who make frequent career changes and have little loyalty to a particular firm. On average, people change careers every 10 years. A recent Harris poll found that only 39% of workers intend to hold the same job in five years. However, businesses are investing more in training and other employee perquisites and amenities; the result is that job tenure actually increased in the 1990s.

### **Separation of Business Functions:**

Firms are increasingly separating their operations in different locations and cities. Corporate headquarters tend to be found in cities with good airline connections, abundant professional support services, and a high quality of life. The same is true of research and development functions, that must also have access to highly educated workers and educational institutions. Back offices locate in places with good communications infrastructure. Modern high-tech manufacturing firms are looking for good transportation networks and a well-educated workforce that is flexible in their work attitudes.

Contemporary telecommunication equipment lets companies link all of these functions much more easily than in the past. A result of the ability to split functions is less corporate loyalty to any one community.

### **Home/Work Fusion:**

An increasing number of workers have a desire for more flexible work schedules. A growing number of firms are responding by offering flextime and telecommuting. In 1997, 27% of the civilian labor force worked flexible schedules, an increase of 83% since 1991. In a recent survey of human resource executives, 43% said that an increasingly mobile, telecommuting work force would be the biggest workplace trend of the 21<sup>st</sup> Century.<sup>3</sup> Increased telecommuting can save firms money in terms of office space and improve productivity as well as benefiting employees. However, in some high-tech firms, there is a need for team problem solving and face-to-face contact, thus making telecommuting undesirable. According to a report from the Massachusetts Institute of Technology, "complex knowledge still needs to be transmitted face-to-face."



Technology does not yet have the 'bandwidth' to replace face-to-face communication."

### **Age of Talent:**

Knowledge in the form of people has become a source of competitive advantage. Knowledge, skills, and experience have greater value than capital equipment or capital itself. However, knowledge and skills become obsolete quicker than ever. The half-life of an engineer's knowledge today is only

five years. Eighty-five percent of the information in National Institutes of Health computers is upgraded in five years. Continuing job training and education is becoming increasingly essential. However, not all high-tech jobs demand post-doctoral or advanced degrees. Many high-tech jobs will require special skills, but only technical training or associate degrees.

### **Diversity:**

Changes in laws and legislation have opened the doors to segments of the American population that were previously shut out or hamstrung in job opportunities by gender, race, age, or ethnicity. The New Economy workplace is far more diverse than 20 years ago, and its workers have greatly varying needs and desires in terms of services, amenities, or work schedule. Another aspect of diversity is diversity of career and life paths. Not only will employees change jobs more frequently, but they may hop back and forth between the public and private sector, large firms and small, full-time and part-time work.

### **Generation X and The Workplace:**

As thirty and twenty-somethings move into the workplace in large numbers, they are forcing companies to respond to their lifestyles and desires. Research shows that they value quality of life very highly and seek more balance between their work and private lives. They tend to be more entrepreneurial and more likely to start their own firms or join small companies than their parents. They tend to have less loyalty to a particular firm and often hop to new jobs that offer more money or better working conditions.

### **Retirement Age Disappearing:**

While many in the media have focused on Generation X employees and the New

<sup>3</sup> John Challenger, "24 Trends Reshaping the Workplace," *The Futurist*, Sept., 2000, p.4.

Economy, baby boomers are increasingly foregoing retirement in favor of starting new careers or making ends meet. Additionally, companies are working to retain older workers in the face of labor shortages and the transient nature of younger workers. They are placing increasing value on know-how, corporate memory, and wisdom as well as youth and energy. Labor force participation rates for those between 54 and 64 are predicted to increase sharply. True retirement, a permanent end to work, will be delayed until very late in life. Adapting to the needs of older



employees in the workplace will be a new challenge.

### **Two-Income Couples Are Becoming Even More The Norm:**

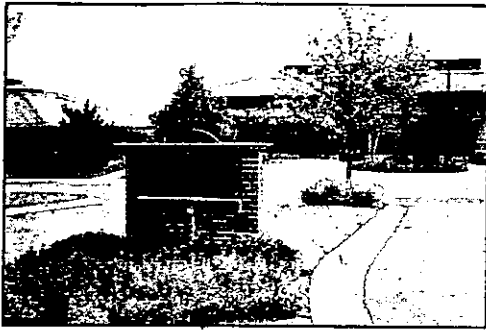
By 2005, in 75% of households both partners will work full time, up from 63% in 1992. Between 1996 and 2006, the number of women employed in the U.S. will grow from about 60 million to 70 million, a 14% increase. Demand for on-the-job childcare or eldercare, extended parental leave, flexible work schedules, and other family-oriented benefits will grow. Two-income families can also afford to eat out more, take more frequent vacations, and buy goods. They can also be more entrepreneurial, as one family member's salary can carry them over while the other starts a new business.

### **III. HIGH-TECHNOLOGY FIRMS AND THE NEW ECONOMY**

High-technology firms are often seen as the drivers of the New Economy, and in some important ways that is true. They tend to pay high wages and attract well-educated, affluent workers. For example, in Maryland high-tech wages surpassed the private sector in the rate of growth in all but two years in the 1990s. Biotechnology had the highest weekly average wage--\$1,350--compared to the average private sector wage of \$683 in 2000. Nationally, high-tech industry output grew four times faster in the 1990s than the economy as a whole. High-tech jobs pay an average of almost 80% more than the median wage. And information technology industries now represent 8.2 % of NDP, up from 4.9 % in 1985. Predictions are that these industries will account for over 15% of GDP by 2020. Not surprisingly, many communities focus their economic development efforts on high-technology firms.

But it is important to understand that the high-technology sector is not monolithic in terms of the people they employ or the factors that influence where they locate. For example, biotechnology is still an infant industry and very dependent on associations with universities and their research facilities. Biotechnology laboratories have very specialized building requirements. On the other hand, high-technology manufacturers employ a much more blue-collar workforce, many of whom do not need college degrees. These firms want low-cost space and room to expand, which are more traditional locational/siting preferences.

A recent study of a planned high-technology business park near Boston



predicted that 30% of the 7,500 expected jobs would pay \$34,000 or less and about 33% would pay \$64,000 or more.<sup>4</sup> However, because 75% would likely live in two-income households, only 17% would be in households with income of less than \$60,000.

Given this wide variation in locational preferences, employee profiles, and other attributes, it is clear that no one rigid set of local government land use and other policies (e.g., target housing and community amenity efforts mainly at higher-income, Generation X workers) will succeed in satisfying the needs of the high-tech sector. As discussed below, these policies will have to be multi-faceted and as nimble as the businesses themselves.

Communities must also keep in mind that other sectors of the economy will also continue to be extremely important. Not all growth and jobs will be in high-tech industries. Because improved productivity and wealth will give people more time and money to play with, experts predict that leisure-oriented business will dominate the world economy by 2015, accounting for roughly half the U.S. GNP. Moreover, they predict that as many as 70% of the well-paying jobs over the next 10-15

years may not require a four-year college degree. These service, craft, and technical functions will require an associate degree or technical training.

#### **IV. LOCATIONAL PREFERENCES: WHAT HIGH-TECH FIRMS ARE LOOKING FOR**

##### **Overview.**

Despite the recent hiccup in the national and world economy, all prognosticators predict that the high-tech sectors will continue to grow. In addition, thousands of new firms will spring up over the next decade. And because they are not typically tied by markets or raw materials to a particular location, high-tech firms are relatively footloose — these firms can choose from a wide variety of locations within which to settle or expand. Knowledge workers, the raw material of the industry, also have many options as to where they can live and work. This means that local governments need to understand what high-tech firms are looking for when they search for a new location or room to expand.

Again, it is important to keep in mind that the industry is not monolithic. That is, the locational preferences of high-tech firms can vary depending on whether, for example, which business function needs to be served. Does the firm have a commercial product to produce/distribute or does it need to focus on research? Locational preferences also vary significantly depending on the category of high-tech firm. High-tech manufacturing firms typically look for much different locations (suburban business parks) than software development companies (suitable for more urban environments).

<sup>4</sup> Center For Urban & Regional Policy, Northeastern University, "Telecom City Housing Impact Study," July 2001.

Nevertheless, one fact is very clear: The traditional factors that dominated locational decisions by growth companies in the 1950s-1980s have changed dramatically. Firms choosing a location in that era would typically have scrutinized labor costs and labor climate, proximity to markets or raw materials, and living preferences of the chief executive officer. While a few of these traditional factors are still important -- for example, CEO preference is still a significant factor driving many high-tech firms in locational decisions -- considerations that once ranked relatively low have become more important, and new factors have emerged. These include quality of life, technology infrastructure,

and availability of skilled, educated workers, among others. Some of the critical factors are discussed in greater detail below.

While local governments can have only marginal influence over some of these factors (e.g., availability of venture capital) others such as maintaining a high quality of life are very much the bailiwick of cities and counties.

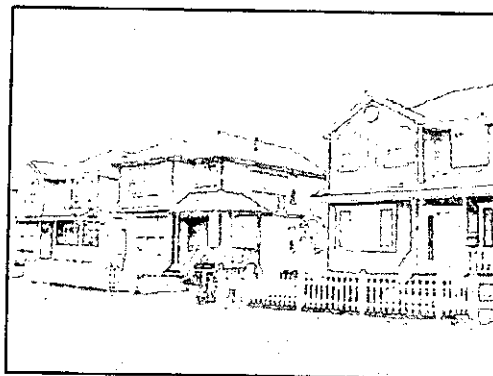
The table below, from a working paper published by the Brookings Institution, contains a useful summary of modern locational considerations by business function.

<b>BUSINESS GEOGRAPHY BY FUNCTION</b>			
<b>Function</b>	<b>Location Priorities</b>	<b>Sensitivity to Cost</b>	<b>Examples of Preferred Locations</b>
Headquarters	<ul style="list-style-type: none"> <li>• Accessible international air service</li> <li>• High-end hotels, restaurants, entertainment, cultural events; major league sports team/stadium with skyboxes to facilitate heavy inter-company face-to-face interaction</li> <li>• Professional support services, good choice of office space or availability of land to build-to-suit</li> <li>• Diverse professional employee base</li> <li>• Attractive housing for executives, affordable housing for managers and support staff within reasonable commute</li> <li>• Strong educational system for employees' children and continuing adult education</li> </ul>	Cost sensitivity (within a normal range) is less important than availability of key requirements.	Central cities or strong first tier suburbs (e.g., Washington D.C.'s suburbs: Prince William, Fairfax and Loudon counties); northern suburban Atlanta, Charlotte, Dallas, Raleigh-Durham
Research and Development	<ul style="list-style-type: none"> <li>• Proximity to concentration of universities</li> <li>• Clusters of highly educated workers, or alternatively, lifestyle amenities that are attractive to this pool of talent</li> <li>• Control over physical environment -- to buffer company from nosy neighbors, sharing of secrets by employees</li> </ul>	Cost sensitivity is less important than the availability of talent and other requirements (although R&D may be more sensitive to cost than Headquarters)	Near universities, in large metropolitan areas; campus locations favored; Route 1 near Princeton, New Jersey, home of several pharmaceutical companies

Back Office	<ul style="list-style-type: none"> <li>State-of-the-art telecommunications capacity</li> <li>Affordable housing costs</li> <li>Quality labor force with technical skills</li> <li>Good schools for employee recruitment and their children</li> <li>On-going available adult education and training</li> </ul>	Sensitivity to cost: real estate, telecommunications, housing, taxes	Medium and small sized cities: Tampa, FL, Tucson, AZ; former military installations; in large metropolitan areas, prefer suburbs
Manufacturing and Distribution	<ul style="list-style-type: none"> <li>Good transportation system; near major interstates</li> <li>Strong utility systems; electric, water, wastewater, gas</li> <li>Well-educated workforce; strong, specialized training programs</li> </ul>	Sensitivity to housing costs; taxes, utility rates	On interstate, near large markets; access to suppliers (Chicago-Aurora, Cincinnati south suburbs and northern Kentucky, Jacksonville, Florida and Kansas City, Missouri western suburbs

Source: Natalie Cohen, "Business Location Decision-Making And The Cities," Brookings Institution (April 2000)

Another survey that focused on location differences among high-tech firms and all firms was also revealing. Environmental quality, cost of housing, and easy commute all ranked high for high-tech firms and much lower for firms as a whole. On the other hand, schools and safety were the top-ranked considerations for all firms.



ENVIRONMENTAL QUALITY AND HIGH TECHNOLOGY LOCATION			
High Technology Firms		All Firms	
Amenity	Average Rank	Amenity	Average Rank
Environmental Quality	3.00	Good Schools	2.11
Cost of Housing	3.24	Public Safety	3.89
Cost of Living	3.38	Environmental Quality	4.22
Good Schools	3.50	Cultural Amenities	4.56
Easy Commute	3.50	Proximity of Housing	4.89
Recreational Amenities	3.63	Easy Commute	4.89
Climate	3.75	Cost of Housing	5.00
Cultural Amenities	4.13	Recreational Amenities	5.22
Government Services	4.50	Climate	5.89
CEO Preference	4.50	Government Services	6.22
Public Safety	5.25	Cost of Living	6.67
Proximity of Housing	5.25	CEO Preference	6.78

Source: Paul Gottlieb, "Amenities As An Economic Development Tool: Is There Enough Evidence?," *Economic Development Quarterly*, August 1994, p. 276

### General Locational Factors.

A more detailed discussion of certain locational factors helps to better illuminate the steps that Montgomery

County might take to strengthen its competitive position by making informed changes in its land use and

development regulations and procedures. These factors have been identified as significant or growing in importance by a number of commentators and recent studies.

### **Technology Infrastructure:**

Excellent infrastructure is critical to the operations of most high-tech firms in a variety of ways. Non-interruptible power that is free from voltage spikes is critical to biotechnology labs and Internet-based companies. Water quality is very important to advanced technology manufacturers and biotech companies. Telecommunications capacity may or may not involve a direct public role, but access to public right of way is always required. And as noted in a recent Brookings Institution report, "in places not already served by multiple providers of broadband communications capacity, public sector organizations may have a role to play. Cities can be important launch customers to entice a private provider into areas that they do not currently serve. Information from cities about infrastructure availability (e.g., fiber optic network layouts) is also invaluable in making siting decisions. Additionally, good transportation access is important not only for shipping products (such as software and instruments), but also for employees who commute to work.

### **Quality of Life:**

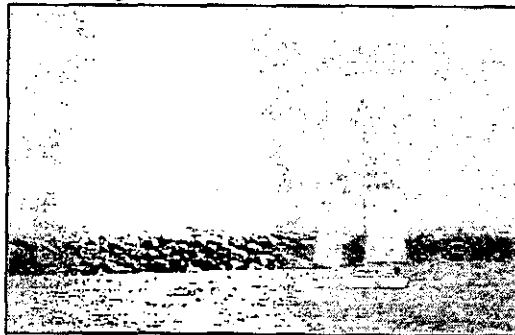
A number of major recent studies and surveys on locational preferences of high-tech firms all found that quality of life ranked at or near the top.<sup>5</sup> In this

<sup>5</sup> Richard Florida, "Competing in the Age of Talent: Quality of Place and the New Economy," R.K. Mellon Foundation (Pittsburgh January 2000); Natalie Cohen, "Business Location Decision-Making and the Cities: Bringing Back Companies," The Brookings Institution (April 2000); Doug Henton and Kim Walesh, "Linking the New Economy to Livable Community," The James Irvine Foundation (California April 1998); Paul Gottlieb, "Amenities as an Economic Development Tool," Economic Development Study, August 1994, p. 276.

context, quality of life means natural, recreational, and lifestyle amenities and overall environmental quality.

Knowledge workers balance economic opportunity and quality of life when selecting a place to work and live. A 1998 survey of more than 1,200 high-tech workers found that a community's quality of life was the second most important factor -- just below salary -- and more important than benefits, stock options, or company stability in the attractiveness of a job.<sup>6</sup>

Knowledge workers want their amenities and recreational activities on a "just-in-time" basis, that is, they want them to be easy to get to and available quickly. They want these amenities to blend seamlessly with work, and they want a wide range available to them. Water-



based amenities and recreation are particularly important.

Leading technology regions such as Seattle and Austin have aggressively pursued strategies to bolster environmental quality, natural amenities, and recreational opportunities. Both have placed a high priority on trails, parks, and access to water-based recreation. Both have adopted zoning regulations that preserve views and sensitive environmental areas and well as promote as lively urban spaces.

<sup>6</sup> KPMG/CATA Alliance, *High Technology Labor Survey: Attracting & Retaining High Technology Workers*, KPMG, June 5, 1998.



While high-tech companies often thrive on change, they want certainty that quality of life will be protected. Intel and other technology companies have been strong supporters of Portland, Oregon's, regional plan that includes ambitious elements covering transit corridors, mixed-use developments, urban greenspace, and growth boundaries.

Some site location experts maintain that since most employers no longer offer or guarantee long-term jobs, the best benefit will be quality of life in the community in which the worker lives. "Ironically, this will mean that the role of government will change to an attractor of people rather than an attractor of firms."

#### **Efficient, Expedited Project Permitting:**

How quickly a facility can be built or expanded is often critical to a high-tech firm that must respond quickly to a market opening or to commercialize a product. Thus local governments that can offer an efficient, expedited process are at a significant competitive advantage. In Seattle, for example, a reportedly streamlined permitting process allows project reviews and approvals within 5 months for laboratory and similar facilities.<sup>7</sup> In Boulder, Colorado, the county allows high-tech firms to provide self-inspection for

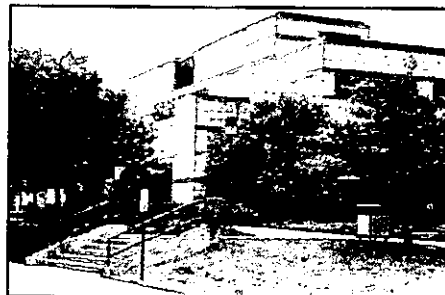
building permits when office or manufacturing space needs to be reconfigured. This self-inspection process, conducted by company employees who have certified knowledge of building codes, has reportedly shaved weeks off the construction/building permit process.

#### **Clustering of Similar Companies:**

For a variety of reasons, high-tech firms often seek to locate near similar companies. Software firms, for example, do not like to work in isolation. They and their employees hunt out opportunities for interaction with other similar firms and employees to augment and transfer knowledge. While they are fiercely competitive, they also often collaborate on products or projects. Research indicates that one of Silicon Valley's important advantages over other technology regions in the country is its ability to foster collaboration. Additionally, high-tech firms like to cluster because they can take advantage of specialty support services and proximity to educational facilities. Clustering is also attractive to knowledge employees, because they typically like to live in places with "thick" labor markets that offer a wide variety of employment opportunities.

#### **Proximity to Major Educational & Government Institutions:**

The presence of major research universities, educational facilities, and government institution offices are a powerful attractant to many high-tech firms. This is particularly true of the



<sup>7</sup> Paul Sommers and Daniel Carlson, "Ten Steps to a High-Tech Future: The New Economy in Metropolitan Seattle," The Brookings Institution (December 2000).

biotech sector, where a number of companies are spin-offs from research universities. These firms are likely to stay close to facilitate regular contact with the university and to have access to students and nearby clinical trials.

#### **Skilled, Educated Workers:**

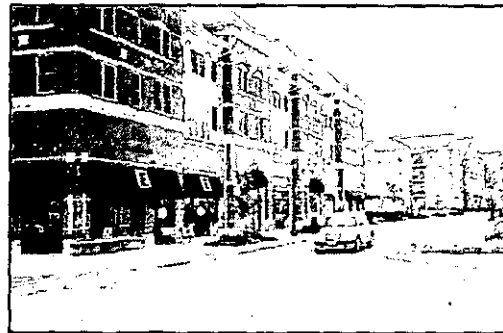
High-tech firms need a deep pool of highly educated workers as well as those who may have lesser educational credentials but who are highly skilled. As one observers has noted, corporate real estate executives used to chant, "location, location, location." Now the mantra is "education, education, education." On one end, access to knowledge workers with advanced degrees is essential for bio tech, software development, and internet firms. On the other hand, high-tech manufacturing jobs often do not require a college degree, but employees must still have the skills to handle precise instruments and be highly motivated.

Several studies of high-tech firm locational decisions conclude that having a readily available and qualified workforce is one of the best investments that state and local governments can make.<sup>8</sup> For example, Motorola-Siemans was considering locating a product development facility next to a manufacturing plant in Richmond, Virginia. However, there was no engineering school in the region, a major negative. In response, the city worked with Virginia Tech to raise money and find land for a new engineering facility that help clinch the deal. Continued workforce education and training are also critical as is having such training readily available to workers at convenient places and times.

<sup>8</sup> Natalie Cohen, "Business Location Decision-Making and the Cities: Bringing Back Companies," The Brookings Institution (April 2000).

#### **Housing Costs/Diversity:**

Because the high-tech sector is not a monolithic block of young, highly paid workers, it is essential to most companies that a locale have a variety of housing choices available in various price ranges. Silicon Valley is a poster child for the problems created when a region lacks a range of housing choices. In the 1980s and 1990s, it began losing firms and jobs to other regions and states largely due to unaffordable housing. Businesses were forced to pay a premium to attract and retain workers.



Moreover, intense housing market pressures can contribute to urban sprawl -- loss of open space, longer commute times, grid-locked freeways, and more air pollution. All of these spin-off problems makes a region less attractive to high-tech firms.

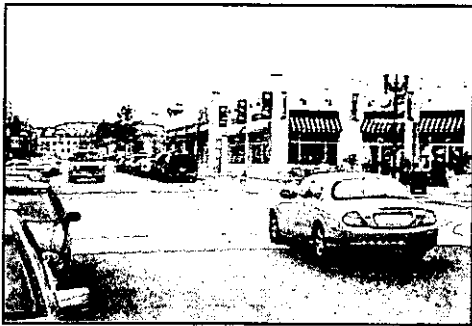
#### **V. WORKPLACE/SITE PREFERENCES OF HIGH-TECH FIRMS**

Once a high-tech firm selects a region for relocation or expansion, a variety of site and workplace preferences come into play. Unlike some regional preferences that may be beyond the ability of local governments to influence, site and workplace factors can often be shaped by city and county land-use policies and regulations. This section discusses some of the key site and

workplace preferences of high-tech business.

### **Services/Amenities For Employees.**

As several recent studies reveal, it's not business as usual when it comes to building business parks for high-tech firms. According to the author of a new Urban Land Institute handbook on business park development, "in the 1970s we saw the development of low-scale corporate campuses built by individual companies. Those parks...on



greenfield sites relied overwhelmingly on the automobile and lack a strong sense of place. Companies today want something different." As the *Wall Street Journal* reported in an article on San Jose, "It's a lot more fun to be in a locale where you can go for a walk and have a nice dinner, or shop or take in a hockey game, than it is to be isolated in some sprawling suburban office park where a little truck comes by at lunch time and sells microwave burritos."

As discussed in greater detail below, new office users, particularly those with ranks of knowledge workers, are increasingly looking for services -- restaurants, banks, travel agencies, auto service stations -- within or very close by the business park. Day care facilities for children and, increasingly, elderly parents are pluses. Parks with gathering places and "town centers" are also seen as desirable as well as those with sidewalks and trails for walking.

Quality and convenience are watchwords. Some communities are tackling the lack of amenities in existing business parks with transit, shuttle, and other links to lively centers. For example, in Creve Coeur, Missouri, executives of the new Danforth Plant Science Center are strong supporters of a proposed greenline pedestrian connection between the center and downtown Creve Coeur.

A recent detailed study for the City of Vancouver, British Columbia, found the following type of non-industrial land uses often associated with high-tech business parks:<sup>9</sup>

--Common buildings with services: Most multi-tenant high-tech parks have a common building that offers executive services such as shared clerical staff, meeting management firms, and recreational facilities.

--Child care and schools: High-tech workers frequently have young families and need child-care services. In one case, an on-site elementary school is being developed to allow employees to have lunch with their children.

--Recreation facilities: Most high-tech parks provide both indoor and outdoor recreation facilities such as jogging trails, basketball courts, and play fields.

--Food and beverage: A range of food and beverage outlets on site, with flexible and extended hours, is important to serve employees.

--Retail and services: Access to basic services such as laundry, dry cleaners, and travel agents is needed, preferably with the park.

<sup>9</sup> "High-Tech Industry In The Urban Context: A Discussion Paper," City of Vancouver, B.C., Planning Department (September 1998).

--Bank: All high-tech parks survey indicated an on-site banking facility with at least an ATM is important.

--Bicycle and alternative transportation facilities. A large number of young high-tech employees cycle to work when possible. Full facilities such as showers, a towel service, cycle storage, etc. are often offered by firms.

--Residency hotels: A large percentage of high-tech employees are on contract for periods of time ranging from one week to several months. This, coupled with frequent and prolonged training, results in a need for intermediate-stay hotels. These are typically within walking distance of work.

This list suggests that local governments should ensure, at the very least, that their development codes encourage a wide mix of uses in business parks. Some, such as Ft. Collins, Colorado, have gone further and required a mix of uses in some business parks. These codes will also have to be flexible in allowing firms to address parking requirements that will change dramatically over time as uses change. Loudoun County, Virginia, for example, allows high-tech firms with few employees but large space demands to reserve land for parking in the future instead of requiring its construction initially.

Interestingly, public safety and security tend not to be high-priority locational factors for high-technology firms. (See Gottlieb survey results at p. 10 of this report.) Public safety ranks much higher for all firms in recent surveys. While some select high-tech firms, especially those producing products for the defense sector or with sensitive trade secrets, do

attach a great deal of importance to security, other locational factors tend to be much more important, even in the wake of the September 2001 terrorist attacks.

### **Business Parks With Flexspace.**

With volatile markets, rapid mergers and acquisitions, and smaller firm size, many high-tech businesses have very different space needs than larger companies that dominated the economy 20 years ago. These firms are often looking for space built by someone else with leases that are very flexible to allow expansion and contraction as needed. Successful high-tech business parks cater to these needs with more modest, lower-rise buildings with smaller floor plates than those found in 1970s sprawling campus-style complexes. Because many high-tech firms, especially those engaged in software/internet development activities, have more modest space needs, they fit more easily into town centers and older downtowns.

As discussed above, an adjunct to having business parks with flexible space is being able to respond to the need of high-tech firms to reconfigure or expand existing space quickly to exploit a market opening or to commercialize a product. Thus local governments that can offer an efficient, expedited development and construction review process are at a significant competitive advantage

### **Flexible Building Workspace.**

Many high-tech firms are smaller and increasingly project-driven, reconfiguring and changing based on changing business opportunities. In the workplace, "privacy is being replaced with productivity, hierarchy with teamwork, and status with mobility." This focus on creativity and knowledge

requires the design of more varied, less prescribed work spaces that encourage creative thinking and informal interaction. It has also fueled the move toward team-based corporate office configurations.

According to the Architecture & Engineering Quarterly, to reduce costs, fixed work spaces are becoming smaller, and office tenants are devoting more of their real estate to open plan space.<sup>10</sup> In a recent Building Owners and Managers Association (BOMA) survey, the average office tenant devoted 49 percent of total space to an open plan.

According to one experienced firm that works with Internet start-up companies in Denver, adaptable design enables these companies, whose rate of growth is uncertain, to work in a productive and stimulating environment. "The companies that we are working with have no ability to project growth. As a result, everything we do for them has to serve multiple roles. There is no more hierarchy of space standards than we saw in the past -- that model is simply too rigid." Again, local governments that can offer an efficient, expedited development and construction review process are at a significant competitive advantage when it comes to attracting or retaining these firms.

Technology developments will continue to shape the 21<sup>st</sup> Century workplace. For example, wireless technology is emerging as a significant design consideration. The Cahners In-Stat Group estimates that the number of wireless data users will skyrocket from 784,000 in 1999 to nine million in 2003. This technology will enable easy configuration of space. Corporate

intranets and extranets, along with videoconferencing and media distribution technologies, will also enable "virtual-teaming."

Although communications technologies have facilitated remote work on a part-time basis -- there were approximately 12 million part-time teleworkers in the U.S. in 1998 -- only a fraction of employees telecommute full-time, so the need for space for these employees does not disappear. Design and facility management must thus accommodate growing numbers of contingent, remote, and field workers.

All of the trends suggest that local governments should carefully re-examine development standards such as those for parking to ensure they reflect modern practice and demands.

### **Fighting Isolation/Fostering Collaboration.**

Companies are realizing that e-mail, voice mail, and other forms of electronic communication are increasingly replacing face-to-face interaction on the job. While this isolation may provide the quiet time necessary to think, write, and create, it also hinders the teamwork and brainstorming time so critical to developing new ideas. To address this issue, firms have taken several approaches. One, discussed above, is to design work space to encourage interaction. For example, Alcoa Aluminum recently abandoned its high-rise office headquarters in Pittsburgh with private 12' x 15' offices for a new low-rise complex on the Allegheny River that according to its CEO will have "escalators instead of elevators and plenty of meeting rooms...there will be a lot of places where people can gather."<sup>11</sup>

<sup>10</sup> Eileen March, "Integrated Parts," *Architecture & Engineering Quarterly* (May 2001).

<sup>11</sup> Joan Hamilton, "The New Workplace," *Business Week* (April 29, 1996).

At the same time, smart business park developers are addressing this need for interaction by creating outdoor spaces and places where people can gather and talk informally -- town centers with restaurants and coffee shops, parks and plazas, civic centers, recreation space, and the like. Some communities require such amenities in business parks through zoning regulations.

#### **Access/Transportation.**

Although the flow of information electronically drives the New Economy, good surface access to a site remains paramount for a number of reasons. For firms that ship products, many have customers that rely on just-in-time delivery. Congestion that slows truck and overnight deliveries can be a serious impediment and business cost. And congestion that adds to commute times is one of the most significant frustrations to employees and is often seen as a major indicator of erosion in an area's quality of life. A number of studies also demonstrate that high-tech firms value transportation mobility options that permit employees to have easy access to restaurants and services during the work day. An increasing number of local governments have responded by requiring sidewalks, trails, interconnected street systems, bicycle racks and other such facilities in business parks as well as encouraging mixed-use developments that can help reduce traffic.

#### **Locational Factors and Site Preferences For Specific High-Tech Industries.**

The general locational factors and preferences discussed above provide some important guidance in shaping local land use and development policies to accommodate high-tech industries. It is also useful to take this inquiry to the

next level and highlight some of the specific locational preferences of the biotech, software/ internet, and manufacturing sectors, which differ somewhat given the varying needs of firms in each.

#### **Biotechnology Firms.<sup>12</sup>**

Most biotech firms are young and very dependent on close associations with educational institutions and their researches. Most locate near an urban research university or government research institutions and are often linked by shuttles. Only a few actually produce



products at this point, although commercialization is beginning. Montgomery County is already one of the leading biotech centers in the nation. Its biotech firms are maturing and moving beyond research and into the production phase.

- Facility needs vary greatly depending on whether a firm has a commercial product. The industry uses office, flex, and industrial space. Flex buildings may be more suitable for labs while biotech firms that use computers more than test tubes are at home in more traditional office buildings.

<sup>12</sup> The Maryland-National Capital Park and Planning Commission has produced an extensive report on the biotech industry in the county, "The Biotechnology Industry in Montgomery County: Factors Related to the Development of the Industry Including Land Use Issues" (August 2000).

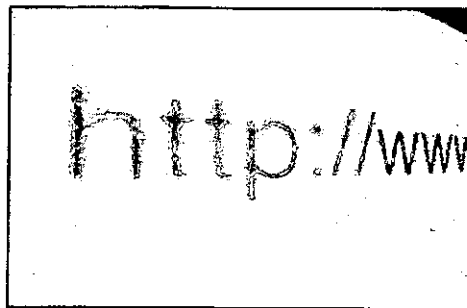
- Biotech labs are costly and require special containment and disposal capabilities. The work environment typically requires high standards in terms of security, ventilation, floor loads, power supply, and water. The lack of appropriate flex space that could be adapted for labs was the most common problem cited by industry representatives in a recent study for Montgomery County.
- Clustering is definitely a factor for biotech firms. Montgomery County has identified seven biotech clusters in the county including industrial parks, mixed-use areas, and the Bethesda/Silver Spring central business districts. Except for the Shady Grove Life Sciences Center, biotech firms are intermingled with many other industries.
- Employees typically place a high value on urban amenities



(restaurants, banks, personal services) and easy access to their homes.

#### **Software/Internet-Based Companies.**

The major asset of these firms is their people and knowledge. Workers are typically well-paid and receive stock options. Until the recent dot.bomb shake out in the industry, workers often jumped jobs looking for higher salaries and better working/living conditions.



Attracting and retaining key employees is priority concern.

- Workers prefer an active urban environment with many eating, drinking, recreation, and entertainment options.
- Firms in this sector are found more often in urban and downtown locations than other high-tech companies. They often prefer unusual space that will spur creativity and imagination. Thus renovated, historic structures can be more appealing than high-rise office buildings.
- Ease of access between work and home is important. Traffic congestion is a major negative factor.



#### **Advanced Technology Manufacturers.**

Advanced technology manufacturers produce a wide variety of products ranging from aviation equipment to optical instruments. The locational needs of high-tech manufacturers are similar to that of traditional industrial firms. They look for affordable space and access to affordable housing for their largely blue-collar work force. Facilities must have adequate square

footage, room for expansion, and good truck access for shipping products and receiving raw materials and parts. These priorities lead many to locate in suburban business and industrial parks that offer affordability for the company and provide workers a pleasant environment. Additionally, they desire locations that provide access to training opportunities for employees.

### **Conclusions and Recommendations:**

The locational and site preferences of high-tech companies discussed in this report suggest a number of steps that local governments can take to improve their attractiveness to these firms. This section presents some recommendations for an overarching strategy with respect to revamping and refining development review processes and regulations as well as some specific development code changes that should be considered.

There are several important context points that should be kept in mind while considering code revisions. First, local governments simply are not in a position to influence or respond to some important business locational preferences. Recall that one of the dominant factors for all firms continues to be where the CEO wants to live. That variable is hard to regulate or address. Availability of venture capital is another criterion that is difficult for local governments to control.

Second, high-tech firms vary dramatically in terms of needs, products, employees, and many other factors. Even within one sector, such as biotechnology, locational and siting issues will differ depending on the function of the company, for example,

research vs. production. This variety makes it challenging to develop a strategy that will be effective for a wide range of firms.

Finally, while a number of steps to improve land use review procedures and standards are presented here, Montgomery County and the Washington, D.C., region are obviously doing something right in terms of attracting and retaining high-tech companies. A recent report for the R.K. Mellon Foundation by Richard Florida found that the Washington, D.C., area scored very highly in terms of overall amenities and environmental quality, both factors that tend to correlate with high-technology development.<sup>13</sup> The region already has one of the highest concentrations of high-tech firms in the nation.

### **Overarching Strategy**

Because of the tremendous variety in high-tech firms, it makes sense to **craft a locational strategy that focuses on attracting and retaining people, not specific types of firms.** For example, if a strategy focuses heavily on younger, higher income Generation X knowledge workers, it may overlook the needs of the blue-collar high-tech manufacturing employees, which differ substantially in a number of ways. A more successful approach will be to recalibrate land-use policies to address issues like maintaining a high quality of life, easy access to work, and provision of amenities. These are issues that cut across and appeal to a wide swath of high-tech firms and workers. As one observer has noted, "local governments will be entrepreneurial in devising

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<sup>13</sup> Richard Florida, "Competing in the Age of Talent: Quality of Place and the New Economy," R.K. Mellon Foundation (January 2000).

products and services that can sustain social capital within the community." Second, **land use plans and policies should accommodate the increasingly diverse work and living patterns of high-tech employees. People need to have real choices when it comes to where and how they live.**

Seattle is using choice as an organizing principle in its economic development strategy that includes land use aspects: "We are building a city of choices," explains Mayor Paul Schell, "No single solution is for everybody."<sup>14</sup> Seattle recognizes that workers need choices in housing, training, recreation, and transportation. Some of today's Generation X workers who value lively urban environments will soon be looking for suburban houses with yards to raise children, buying them from empty-nester Baby Boomer high-tech employees tired of mowing the lawn and who want a more lively urban setting.

Recent statistics show that Montgomery County's workforce is even more diverse than most:

- The typical technology worker is between the ages of 22 and 40 years of age, single or married, highly educated and culturally diverse.
- The baby boomer age group (35-54 years old) represents over half of the total work force.
- There is little evidence of early retirement in the county, with 75% of the people between 55 and 64 still working.
- Nearly 31% of the county's population lives alone.

- Non-family households represent 30% of the total households, and single-parent households headed by females represent 10.5%.

Thus, in Montgomery County even more than many other areas, strategies that call on land use policies to deliver choices are more likely to be more successful.

Moreover, companies will also benefit if the county can easily present choices available, for example, by providing information about infrastructure availability quickly through a GIS system.

*Specific Land Use Policies.* Montgomery County should address the following issues in revamping its development codes and processes:

*Encourage or require mixed-use developments.* Some of the county's zone districts (e.g., commercial) do not allow the type of lively mixed-use developments favored by many high-tech workers and firms. (See p. 14 of this report for a list of desired uses.) Many communities such as Austin, Fort Collins, Colorado, and Cary, North Carolina are not only encouraging but requiring new developments to contain a mix of housing, hotels, educational, and commercial uses. Others provide incentives in the form of density bonuses or "free" residential density on a site in addition to any permitted commercial uses. The county's new RMX district is reportedly working well to encourage mixed-use developments. It can serve as a template for changes in other district.

Other aspect of successful mixed-use development is density. An increasing number of communities are requiring minimum densities and a variety of uses

<sup>14</sup> Quoted in Henton and Walesh, *Linking the New Economy to the Livable Community*. The James Irvine Foundation (April 1998) at p. 19.

at selected locations such as future transit stops to ensure that new developments support mass transit and provide the critical mass for a lively mixed-use development. In contrast, while Montgomery County has been taking steps to encourage residential development around transit stops, there has been little or no high-density residential development at most.

*Encourage or require more amenities in high-tech developments and business parks.* Many high-tech firms and workers are making clear that they prefer to work in locations that are near or have easy access to vital centers with lively amenities and opportunities for interaction. They also value access to open space and recreational opportunities near the work place. Everything from sidewalks and trails to playing fields are assets.

*Promote environmental protection and conservation of natural areas.* High-tech employees value the natural environment both at work and at play. They often oppose sprawl and developments that gobble up open space. Currently, while the county has some regulations on the books to address natural resource protection, including stream buffer and forest conservation standards, it lacks provisions adopted by many other jurisdictions to protect sensitive natural features on a site or open space such as landscaping provisions and wildlife habitat protection standards. Moreover, many developments are not subject to site plan review, which means staff has no authority to review important elements such as connectivity between parcels or landscaping. While staff often attempts to negotiate to accomplish these goals, objective standards would ensure they are achieved while providing more certainty to the development community.

The staff is currently working on landscaping provisions, an important initiative that should be completed.

*Focus on specific uses, not buildings.* In regulating development, most jurisdictions focus on the size of a building in regulating items such as parking. There is little flexibility to respond to uses that may have large space needs but relatively few employees (e.g., biotech labs). High-tech firms in the county have complained that they are sometimes required to build expensive parking that never gets used. The county needs to tailor parking and other standards more to specific uses, and then allow flexibility to meet future needs (e.g., set aside land for parking, but don't require paving at the outset).

*Scrutinize home occupation regulations.* Because an increasing number of New Economy workers will telecommute or start-up new businesses at home, the county should carefully examine its home occupation regulations to ensure they do not unnecessarily stifle this important trend. Of course, surrounding residences need to be protected from potential adverse side effects. Additionally, the county should consider creating flexibility for live-work spaces in commercial and other non-residential districts.

*Improve the development review process.* One of the most important needs of high-tech firms is the ability to respond quickly to new market opportunities and demands. This means that local governments that can provide efficient and responsive development review and construction inspection processes will have a leg up.

Currently, both staff and developers in Montgomery County agree that there is

much room for improvement. For example, while the county has a specifically designed zoning district for development around transit stations, it is little used because it is cumbersome and time-consuming. According to developers, there is little resemblance between the review process in practice and what is set forth in the zoning ordinance. They also point out that because the ordinance has so few standards, there is a great deal of uncertainty in the process over what staff will require—it may vary from case-to-case.

In making changes to development review procedures, the county should not overlook the importance of construction and building code review processes. It will do little good to make the development review process more efficient and predictable, only to have it followed by a slow and tedious process of getting a building built or expanded space built out. Some jurisdictions such as Boulder County, Colorado, are allowing for self-inspection by companies to speed this end of the development process.

By making these substantive and procedural changes in its development codes and processes, Montgomery County can help ensure it will be a desirable community and attractive location for high-tech firms and their workers.

## VI. SELECTED REFERENCES:

Clarion has drawn on a variety of publications and studies in the preparation of this report. The following were particularly valuable and insightful:

Richard Florida, "Competing in the Age of Talent: Quality of Place and the New Economy," R.K. Mellon Foundation (January 2000).

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"The Biotechnology Industry In Montgomery County: Factors Related to the Development of the Industry Including Land Use Issues," The Maryland-National Capital Park and Planning Commission (July 2000).

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MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION  
Montgomery County, Maryland

*Zoning Ordinance Analysis*  
*Summary of Roundtable Discussions*

*September 24 - 25, 2001*

*Prepared by:*  
***Clarion Associates LLC***  
***1700 Broadway***  
***Denver, Colorado 80290***

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## **Maryland-National Capital Park and Planning Commission**

### **Zoning Ordinance Analysis**

#### **Summary of Staff Comments From Roundtable Meetings**

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#### **SECTION I - BACKGROUND**

As part of the first step in assisting the M-NCPPC staff with evaluating effective revisions to the County's commercial, industrial and mixed-use zone district regulations (the regulations), the Clarion team<sup>1</sup> led a two-day roundtable discussion with selected County staff, to identify the strengths and weaknesses of the current regulations. More specifically, staff was asked to consider the extent to which they felt that the regulations were facilitating or hindering the type of development patterns desired by the County, such as transit-oriented development.

This report provides a summary of the staff's comments from those meetings, along with written comments received from the staff in response to a questionnaire prepared by the Clarion team for the same purpose. This summary, along with other relevant research, will be used as the basis for identifying important issues that should be addressed in the zoning revision effort.

This report is organized into three main sections. Section I provides the background for this report. Section II summarizes staff comments; and Section III summarizes the comments into specific, identifiable issues for both the substantive and procedural aspects of the regulations.

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<sup>1</sup> The Clarion team is lead by Clarion Associates, and includes Wallace, Roberts & Todd; Mary Means and Associates; and Zimmer Gunsul Frasea Partnership.

## **SECTION II - SUMMARY OF COMMENTS**

The staff comments have been categorized as either pertaining to the procedural requirements of the regulations or the substantive requirements. Within those categories, comments were grouped together by major issues or themes that emerged during the discussions. Comments that did not address a particular issue or theme were listed as "general observations" within the relevant category. Major themes or issues are denoted by *italicized text*; staff comments are denoted by a bullet (•).

The staff comments were not edited or revised from their original content. Accordingly, there are instances where the individual observations and comments expressed by staff may be inconsistent or contradictory.

### **Procedural Requirements**

#### ***General Observations***

- The entire ordinance is too complicated.
- The average citizen cannot understand the ordinance.
- In some cases only one or two staff people really understand certain sections of the ordinance.
- The development review process is so complicated, and difficult to get through that it discourages good development.
- The process is thorough, deliberate and fair.
- Even though the County's review process is lengthy, most issues are addressed before they get to the Planning Board, and the applicant can comment to the Planning Board if they disagree with staff. Other municipalities in the County give a lot more discretion and final decision-making to staff.

#### ***The Lack of Development Standards Results in Time-consuming Negotiations with Applicants***

- Because the ordinance does not include a number of common design and development standards (i.e. lighting, landscaping), most issues are negotiated on a case-by-case basis.
  - The environmental guidelines are not promulgated
  - The interim parking regulations have not been codified into the ordinance.
  - There are no lighting or landscape standards.
- Overall, this process has become very time consuming.

#### ***Too Much Detail Is Required Too Early In the Process.***

- Originally, the lack of development standards resulted in more creative buildings and site plans, such as Montgomery Village. As the process became more standardized and political (i.e., more public hearings and meetings), the innovation was lost. Montgomery Village was approved with a very general plan and then came back with detailed site plans.
- Now, the political process requires more detail up front. As a result, design solutions are often hamstrung at the site plan review stage. Friendship Heights is a good example. A lot of restrictions were created early on, which resulted in limited design options at site plan review.

***Most Development and Design Issues Can Only Be Resolved Through Site Plan Review***

- Generally, development issues get hammered out at site plan review, so the lack of standards can be overcome to a certain extent.
- The problem is that site plan review is not required for all development proposals.
  - Example: In the CBDs only 30% of the applications chose the Optional Method Development process, which requires site plan review; the rest of the CBD projects went through the standard review process, with no site plan requirement. In those cases, staff had no authority to review design details such connectivity between parcels or the placement of on-site parking. This has created some obvious problems in the CBDs.

***Economic Development Projects Often Qualify for Expedited Review, Which Reduces The Effectiveness of Site Plan Review.***

- Recently, it has been very difficult to get site plan review on projects located in any of the Industrial Zone Districts. The County's Office of Economic Development can require expedited, or consolidated review process for any project defined as "economic development". Expedited review has resulted in a higher number of subsequent site plan amendments; and less opportunity to address development and design issues.

***Park and Planning Has Limited Administrative Authority to Approve Site Plan Modifications.***

- Park and Planning has limited administrative authority to reconcile incongruent provisions and guidelines, or to approve site plan modifications. If a proposed modification qualifies for administrative review, the Department of Permitting Services (DPS) has the authority; otherwise the Planning Board makes the determination.
- DPS decisions and interpretations are not always congruent with Park and Planning's interpretations.

***Master Plan Guidelines Are Often Treated as Mandatory Requirements Rather Than Policy Guidelines.***

- The Planning Board can disapprove a development plan if it is inconsistent with the Master Plan. The consistency requirement coupled with detailed design and development guidelines included in some of the Sector Plans has elevated the status of the Plan.
- In some cases, Sector Plans have become the "holy grail", and it is virtually impossible to deviate from its recommendations.
- The way in which the Plan's policies and guidelines are implemented or interpreted depends on the political pressure from the community. This inconsistency is troublesome.
- You can't always rely on the Plan to provide direction. The degree of detail varies quite a bit in each Sector Plan. Some Plans include very specific guidelines and standards, others have none.

## **Substantive Requirements**

### ***General Observations***

- There are too many zone districts. Some have become obsolete, other are redundant and need to be consolidated.
- Definitions and terminology are inconsistent throughout the ordinance.
- Including overlay zones, there are 130 zone district categories.
- First floor retail cannot be accommodated in all cases, even though recent policy would support it (i.e. transit oriented development, smart growth).
- Too much land is zoned Commercial (C).
- The commercial zones and transit zones don't work well together.
- The "Purpose" clauses for all zone districts are outdated.
- The transportation element of the Mandatory Referral process could be better codified, in the same manner that forest conservation and SWM are.
- There are internal inconsistencies in the ordinance (e.g. roadway ROW standards are different in Chapters 49 and 50).

### ***The Regulations Are Inflexible, Which Discourages Innovative Design and the Ability to Accommodate Site-Specific Issues.***

- There is not enough flexibility in the regulations to deal with site-specific issues or to reconcile conflicting standards or provisions on a particular site, such as road standards and environmental guidelines.
- There should be flexibility built into the ordinance that allows a developer to exceed density limits in certain areas such as CBDs or near transit stations, provided they meet certain performance standards.
- There needs to be better resolution between the environmental guidelines and other regulations.
  - Example: Setbacks are not flexible when environmental features need to be accommodated, such as SWM and landscaping.

### ***The Current Development Standards (e.g., Setbacks, FAR, Density, Parking etc) Are Not Always Consistent With Current Development Trends such as Transit Oriented Design.***

- Setbacks can be a big problem in certain areas – the bigger the better. Regulations don't have "maximum" setbacks, only minimums.
- Sites are "over parked" – this is especially problematic in the Industrial (I) districts. The parking standards need to be adjusted.
- Lot coverage standards are too difficult to apply universally because the County has such diverse conditions; suburban, urban and rural.
- There are no "public use" standards.
- Mechanical space regulations don't always accommodate the biotech industry needs.
- Density is too low within the entire I-270 Corridor area, and there is too much surface parking.
- There are no lighting standards.
- There are no landscape standards.

- Current road width standards, particular for non-residential zone districts, are too wide (e.g., 3-5 lanes are typically required for new road sections, rather than 2-4 lanes).
- The AASHTO recommends wider Class 1 bike paths than County requirements.

*The Current Development Standards Don't Always Facilitate the County's Land Use and Growth Policies.*

- The Master Plan articulates a vision, but the zoning regulations don't always reflect that vision.
- There are transit stops with no residential developments near them– this is inconsistent with policies supporting TOD.
- Existing development density is too low within the entire I-270 corridor area, and there is too much surface parking.

*The Industrial Districts*

- There are too many Industrial zone districts.
- The Industrial district standards are out of sync with current land use needs. Example: R&D Zone doesn't allow R&D, and the parking requirements are too high in all districts.
- All Industrial districts should be mixed-use.
- There is not enough distinction between the I-1 and I-2 districts.
- I-2 district allows "heavy industry". What does that mean in the County?
- The I-3 district is troublesome. There are no requirements, and some of the conditions seem illogical. This is the only district with a trip mitigation requirement.
- I-4 and I-3 districts should be combined. There is not enough distinction between the two.
- It is almost impossible to get an incubation project approved in the I-1 district.
- Residential uses are too restrictive. This prevents the County from getting better jobs/housing ratios.

*The Commercial Districts*

- Oldest zone districts in the county.
- No residential uses permitted.
- Many uses are outdated or incompatible with newer uses. Many contemporary uses are not included in the use chart.
- There are no FARs in the C districts. Instead, an APF traffic study determines allowable square footage. Thus, the property owner has no way to calculate, in advance, what development potential his property has.
- The C-2 district is very difficult to work with.
- The C-1 district permits almost anything without a lot of conditions.
- The CBD setbacks don't work.
- The C-T district needs to be completely revised.

*Transit District*

- Too much process.
- CBD zones work much better and don't require a rezoning.

### ***Mixed Use Districts***

- The RMX is a new zone district category, which works well. A project plan is required for an Optional Method Development (OMD). Rezoning is not necessary.
- The RMX would be a good zone district in the Life Science Center because it permits higher densities than currently allowed in the Industrial districts.
- Building height requirements are a problem in all mixed-use districts.

### ***The Overlay Zones***

- Most overlays were created to avoid amending the zoning ordinance.
- There are too many overlay zones now.

### ***Ordinance Format***

- The online version of the ordinance is a good tool, especially for searching. However, it has been known to have errors and omissions.
- Flow charts would be helpful to explain the development review process.

## **SECTION III – SUMMARY OF STAFF COMMENTS**

Concerning existing development patterns in the County, three main problems resonated from the collective staff comments:

1. New developments at lower than planned or desired densities;
2. Inappropriate or ineffective land uses (i.e., no mixed uses, limited residential); and
3. Infill and redevelopment at lower than planned or desired densities.

Based on the major themes or issues that emerged during the discussions with staff, there are several overarching problems with the current land use regulations:

1. Lack of minimum development standards;
2. Inflexible and often counterproductive development standards;
3. Overly complex regulations;
4. Outdated and inconsistent regulations resulting from a number of ad hoc amendments to the zoning ordinance, and
5. Inconsistent implementation of General Plan policies and guidelines.

## Maryland-National Capital Park and Planning Commission

### Zoning Ordinance Analysis

#### Summary of Comments from Developer's Roundtable Meeting

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#### BACKGROUND

In addition to facilitating two roundtable meetings with the M-NCPPC staff, the Clarion team led a similar discussion with members of the local development community that have had extensive experience with the County's development review process.

The developers were asked to comment on the efficiency of the development review process, as well as the effectiveness of the substantive regulations.

It is intended that the developer's comments will also contribute to the evaluation of the County's commercial, industrial and mixed-use regulations.

#### SUMMARY OF COMMENTS

The comments have been categorized as either pertaining to the procedural requirements of the regulations or the substantive requirements. Several comments were also proffered on the relevance of the County's adequate public facilities ordinance. Within these categories, comments were grouped by major issues or themes that emerged from the discussions. Comments that did not address a particular issue or theme were listed as "general observations" within the relevant category. Major themes or issues are denoted by *italicized text*, comments are denoted by a bullet (•).

#### Process and Procedural Requirements

##### *General Observations*

- The ordinance is too complicated. You have to hire attorneys to figure it out.
- The staff is good at what they do, and the difficult process has discouraged a lot of bad development from entering the County.
- Improve coordination with other County departments. What the Planning staff wants is not always permissible.
  - Example: on a project in Silver Spring, Planning required pavers, turning radii and a handicap ramp, and then Public Works denied it.

##### *The Process and Procedural Requirements Both Need More Specificity in the Regulations*

- The two biggest problems in getting a project approved in the County are the development review process, and the bounds of authority.
- There is little resemblance between the actual process, and what the ordinance sets forth as the process; and you never know when or where the changes are coming from.
- Tasks are not clearly assigned, nor is process clearly articulated in the ordinance.
- There are no landscape regulations in the ordinance, but staff consistently asks for landscaping.

### ***Too Much Detail Is Required Too Early In The Process***

- The County wants too much specific design information before site plan approval. We have to accommodate the users of the building, and this early commitment to details ties our hands.
- The County wants design details at site plan review that are not required by the regulations, and do not affect site plan issues, i.e., construction drawings and photometrics. This information is expensive to produce, particularly before final design details are approved, and increases the probability that the plans will have to be revised.

### ***The Process Is Too Subjective***

- Very subjective process. Every time a different planner reviews the proposal, the interpretation of the ordinance changes. There are no specific procedural requirements set forth in the ordinance.
- There are too many arbitrary decisions, opinions, and interpretations of the development review requirements and standards of review.
- The County wants mixed-use development, but under the current regulations there is too much subjective interpretation by staff. This is a big disincentive to using the mixed-use regulations. It's too costly to design a project only to have the entire project redesigned by the staff.

### ***The Role of the Master Plan in Regulating Development is Inappropriate.***

- The Master Plan gets more dignity than it deserves.
  - There is too much detail in the Plan.
  - Some zone districts require conformity with Sector Plans. We end up having to amend the Sector Plan to conform to the development plan, because the Sector Plan includes too many detailed guidelines.
- The Master Plan guidelines are not consistently followed, so you don't know when to rely on them.

### ***Some Requirements are Unrealistic***

- First floor retail doesn't always work, but market demands are not considered relevant.
  - Example, the OMD process requires first floor retail. At 2<sup>nd</sup> and Wayne Streets, the first floor retail was built but has never been occupied because there is no market.
- If the County insists on first floor retail, regardless of market demands, or community need, it should be excluded from the FAR calculations.
- The type of retail uses the staff wants at the Life Science Center won't work.

### ***Applicants Do Not Have Sufficient Time to Present Their Projects at Public Hearings***

- The applicant is only allowed 10 minutes to present. Opposition is allowed unlimited time.
- The applicant has to rely on staff to present most of the facts because of time limits. However, if you appeal the decision, staff comments are not considered part of the evidentiary record. Applicant still has burden of proof.

## **Substantive Requirements**

### ***General Observations***

- The R&D zone district is too restrictive, and it's a single-use zone.
- There are no lighting and landscaping regulations, so it becomes a matter of trying to appease the personal taste of the planner reviewing the application.
- "Public use" is not defined in the ordinance, even though it is a required component of the Optional Method Development (OMD) application. Also, by ordinance, the applicant has to set aside 20% of the site for public use, in reality it ends up being 40-50%.
- Density and FAR requirements are inhibiting creative architecture.
- The parking regulations need to be revised. Too much parking required. The minimums should be maximums. Also, government RFPs won't let you build without a certain number of parking spaces approved; current regulations haven't always accommodated this.
- Trip mitigation requirements. There are not a lot of practical solutions for this requirement. For example, carpooling is absurd for some uses, yet it has to be included.
- Signature sets. There needs to be a timeline, and submittal requirements. We always end up getting a redlined copy back.

### **The Adequate Public Facilities Ordinance**

- The Master Plan identifies roads to be built with funding from State; in reality the developers build the roads. The APFO simply puts everyone in the game; it does not improve or reduce transportation problems in the County.
- Traffic is a difficult, regional problem with not a lot of easy answers.